2004

Report of the
Commissioner of the Environment and Sustainable Development
to the House of Commons

The Commissioner's Perspective—2004

Office of the Auditor General of Canada

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Main Points of Chapters 1 to 6

Office of the Auditor General of Canada

The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

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Commissioner of the Environment and Sustainable Development of Canada
Commissaire à l'environnement et au développement durable du Canada
Office of the Auditor General of Canada • Bureau du vérificateur général du Canada

To the Honourable the Speaker of the House of Commons:

On behalf of the Auditor General of Canada, I have the honour to transmit herewith my Report to the House of Commons for the year 2004, to be laid before the House in accordance with the provisions of section 23(3) of the *Auditor General Act*.

Johanne Gélinas

Johanne Gélinas
Commissioner of the Environment
and Sustainable Development

OTTAWA, 26 October 2004

To the reader:

I welcome your comments and suggestions on this Report and other issues related to the environment and sustainable development. I can be reached at the following:

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Foreword

Report of the Commissioner of the Environment and Sustainable Development—2004

Foreword

As Commissioner of the Environment and Sustainable Development, I am pleased to present the 2004 Report for tabling in the House of Commons.

This Foreword is followed by The Commissioner's Perspective—2004, and the Main Points from each chapter. The Report contains six chapters:

1. International Environmental Agreements
2. Canadian International Development Agency—Development Assistance and the Environment
3. Sustainable Development Strategies: Using the Tax System and Managing Office Solid Waste
4. Assessing the Environmental Impact of Policies, Plans, and Programs
5. Fisheries and Oceans Canada—Salmon Stocks, Habitat, and Aquaculture
6. Environmental Petitions

The Commissioner's Perspective—2004

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Johanne Gélinas
Commissioner of the Environment
and Sustainable Development

Introduction

1. This is the eighth annual Report from Canada's Commissioner of the Environment and Sustainable Development, and my fourth Report as the Commissioner. The main purpose of our work (see Exhibit 1) is to assist Parliament, on behalf of Canadians, to hold the government to account for progress on its environmental and sustainable development commitments.

2. The environmental issues that we audit may sometimes seem remote from day-to-day life, but they are not. Ultimately, they are about the safety and beauty of the places where we live and play, the direction of our economy, and even what ends up on our dinner plates. Many of the issues are complex, and advances are often hard won. But the federal government can do much more to ensure that its environmental policies are working and its commitments are being met.

Exhibit 1 **The work of the Commissioner**

The Commissioner represents the environmental arm of the Office of the Auditor General. Our work involves the following activities:

Auditing for results

Our performance audits look at whether activities designed to respond to federal environment and sustainable development policies are being implemented effectively and are delivering results. We select audit topics based on a range of considerations and input. We also monitor departmental progress on recommendations from past audits, and we conduct follow-up audits of activities reported on previously.

Monitoring sustainable development strategies

Designated departments and agencies are required by law to prepare sustainable development strategies and update them every three years. These strategies are meant to be the main vehicle to drive responsible management, from an environmental and sustainable development perspective, throughout the federal government. We assess the quality of the strategies, and we monitor and report on the progress of departments and agencies in meeting selected commitments made in their strategies.

Managing the petitions process for Canadians

The petitions process was established by Parliament to make sure Canadians can get timely answers from federal ministers on specific environmental and sustainable development issues that involve federal jurisdiction. Petitions have prompted such action by federal departments as new environmental projects, follow-up on alleged violations, and changes or clarifications in policies and practices. A catalogue of petitions and responses is available at www.oag-bvg.gc.ca/domino/petitions.nsf/english.

Challenges and opportunities

3. Based on our findings this year, I have identified three areas where I think significant improvement is needed and possible. The federal government should

- make better use of decision making and public policy tools to support environmentally sound development;
- more consistently measure the results of federal efforts, so that all Canadians can assess what is being accomplished and what remains to be done; and
- do more to ensure effective accountability for results.

4. The need for such improvements in management practices resurfaces year after year in our audit work. They are critical to effective federal delivery on environmental and other sustainable development commitments. With the breadth of management experience in the federal government and the wealth of advice available, it is not a question of how to make such improvements, but a matter of priority and will.

5. I remain convinced that strong leadership is also needed to tap the enormous potential of the federal role to protect the environment and promote sustainable development. Nearly two decades after the term "sustainable development" first entered mainstream use, the concept has proved its staying power and value. Canada's Parliament also embraced the concept, and parliamentarians have an important role to play in furthering meaningful progress.

6. Finally, I think it is important to reflect on the international context for environmental and sustainable development issues. Based on poll results, I believe that Canadians want their government to deliver on its international environmental commitments. Doing so is also consistent with Canada's position and reputation in the world. These commitments usually require action both at home and abroad, since the environmental problems they deal with exist in Canada as well as elsewhere.

7. But I am concerned at signs that Canada's environmental status and reputation may be slipping. For example, the Conference Board of Canada rated the relative performance of 23 member countries of the Organisation for Economic Cooperation and Development (OECD) on a range of environmental issues, using OECD data. On that basis, Canada's overall environmental performance was downgraded from an already disappointing twelfth-place ranking in 2002 to sixteenth in 2003. Pollsters have also noted a decline in Canadians' confidence that their country is showing strong leadership on world environmental issues.

8. Given the above, I pay particular attention this year to federal actions to respond to international environmental and sustainable development commitments. I also offer a reminder about some of the key elements of sustainable development that I will be paying attention to in the future.

Our audits show a need to get back to basics

9. Based on our audits this past year (Exhibit 2), the chapters in this Report identify some important accomplishments in federal programs. In the context of international dimensions of federal efforts, for example:

- Canada is meeting internationally agreed-upon targets to help protect the stratospheric ozone layer, and in response to a bilateral air quality agreement, is tracking emissions of pollutants that contribute to smog.
- In the overseas development projects we reviewed, the Canadian International Development Agency is responding to the expressed needs of communities by helping to provide access to water and protect and conserve water resources.

In addition, I note that a separate 2004 Report of the Auditor General shows that Export Development Canada has improved its environmental review processes for project-related export transactions it supports.

Departments are also continuing to provide answers to concerns raised by Canadians through our petitions process. And in most of the cases where we followed up on responses this year, we found that action has been taken on commitments made.

10. These kinds of results reflect dedication and hard work by federal employees. But our audits this year also identified some serious failures that point back to underlying weaknesses in management practices. Our past work makes clear that these weaknesses are not limited to the activities we audited this year. I am convinced that the government's failure to come to grips with some of the basics of good management—tools, measurement, and accountability—results in inefficiencies and undermines the potential for progress and future success.

Exhibit 2 **Our 2004 audits**

This year, we undertook audits of the following topics:

- five international environmental agreements (Chapter 1)
- official development assistance and the environment through the work of the Canadian International Development Agency (Chapter 2)
- commitments from the second round of sustainable development strategies related to using the tax system in the context of sustainable development and to managing office solid waste (Chapter 3)
- strategic environmental assessment (Chapter 4)
- salmon stocks, habitat, and salmon aquaculture (Chapter 5)
- commitments made in response to past petitions on offshore military dumpsites, genetically engineered fish, and an urban transit pilot project for federal public servants (Chapter 6)

A summary of main points from these audits is found at the end of this publication.

A report on the audit of the environmental review processes of Export Development Canada, conducted pursuant to the *Export Development Act*, was also tabled in Parliament this year.

Known tools are often neglected

Important decision-making tools are poorly used

11. A variety of assessment tools can be used to provide the information needed to make decisions that contribute to environmental, economic, and social sustainability. Our audits this year indicate that from high-level decision making to program and project planning, government is not making good use of some of the important decision-making tools available.

12. **The use of strategic environmental assessment is far from adequate to meet its promise in guiding policy and program development.** Strategic environmental assessment is the examination of policies and programs at the planning stage to ensure that before they are approved, their potential effects on the environment receive careful consideration. It provides a basis for deciding whether to proceed and how to maximize positive effects and minimize negative ones. It is potentially one of government's most powerful environmental decision-making tools.

13. Audits in 1998 and 2000 found slow and unsatisfactory progress in implementing a Cabinet directive to departments—first issued in 1990—to undertake strategic environmental assessments. The overall results of our audit this year suggest that most departments still have not made serious efforts to apply the directive. Thus, there is no assurance that decision makers have the information they need to take the environment into account when shaping Canada's future in important areas such as aquaculture, agriculture, and taxation.

14. **Project-level environmental assessment is also not fulfilling its potential in the international development projects we examined.** Environmental assessment was first developed as a project-level tool, and the Canadian International Development Agency has long recognized its importance at this level. But the Agency provides only limited guidance on environmental analysis for projects that fall outside the requirements of the *Canadian Environmental Assessment Act*. These projects, where environmental analysis is suggested but discretionary, account for about 90 percent of Agency initiatives. Even for the projects we examined where the Act does apply, environmental assessment was treated as a paper exercise rather than an effective project planning tool.

15. **Fisheries and Oceans Canada has not used a risk-based approach to manage potential impacts on fish habitat in the Pacific Region.** A wide range of development projects—from aquaculture operations to coastal logging facilities to shoreline projects—are referred to the Department, which has a responsibility to assess whether they should be allowed to proceed, and under what conditions. The absence of a risk-based approach means the Department has had no basis for focussing on projects and areas that pose the greatest risk to fish habitat in the Pacific region.

Policy tools to influence behaviour

16. The federal government also has access to a range of tools to prompt individuals and organizations to improve the sustainability of their behaviour and activities. These tools range from regulations to financial measures to voluntary agreements and social marketing. I continue to believe that the federal government needs to use the full range of its regulatory, economic, and other powers to deliver on its commitments. This year's audit work reveals failures to use available levers.

17. For example, we found cases where undertakings by the government to develop regulations or other controls have not yet been fulfilled. Regulations related to genetically engineered fish, first promised by Fisheries and Oceans Canada more than a decade ago, have not yet been completed. And there has been a lack of progress on determining how to control, through regulatory or other means, the release of substances from aquaculture operations that can cause harm to fish stocks and habitat.

18. **Finance Canada has not done a systematic job of assessing opportunities and options for using the tax system to advance sustainable development.** Finance Canada's role is to provide advice and analysis; yet it has not assessed the extent to which the tax system impedes or favours sustainable development. Nor has it been clear about the results it intends to achieve with the tax-related commitments it made in its 2001–2003 sustainable development strategy.

19. In other words, the federal government has not established a systematic basis for deciding whether and how to tap the potential of the tax system to help shift Canada toward a sustainable economy. For at least 10 years, the federal government has acknowledged the important role that economic instruments—including tax measures—can play in making progress on sustainable development. The Organisation for Economic Cooperation and Development (OECD)—a prominent and respected international organization of which Canada is a member—has also repeatedly noted that Canada needs to make more use of economic instruments and, in particular, "green" tax reform, for environmental improvement. As acknowledged by the Government of Canada, some other OECD countries have made much greater use of economic instruments.

Measuring results

Are we on the right track?

20. One of my ongoing frustrations as Commissioner is the difficulty we face in finding information on actual outcomes of the programs and activities we audit. Are federal environmental and sustainable development initiatives achieving their intended results? Are they fixing the problems they were meant to solve or promoting the positive changes intended? Is the condition of the environment improving? Measuring the effectiveness of actions and determining trends in complex environmental issues will always be challenging tasks. But the government can and must do more to meet the challenges if we are to be confident that it is making the right decisions about where to invest resources and efforts.

21. **This year's audits yielded some examples of good measurement for results.** Under two of the international environmental agreements we audited (the Montreal Protocol and the Ozone Annex of the Canada–U.S. Air Quality Agreement) expected results are clearly defined, and

Environment Canada is measuring and reporting results against these expectations. And Fisheries and Oceans Canada knows the status of the straddling and highly migratory fish stocks we looked at as part of our examination of the United Nations Fish Stock Agreement, though it cannot always demonstrate that conservation objectives for these stocks are being achieved.

22. **But good measurement seems to be more the exception than the rule.** In many cases, we found that little information exists about what is happening on the ground and whether federal activities are driving desired changes. Transport Canada doesn't know the extent of oil pollution from ships in the Canadian Atlantic. Environment Canada does not know how well our internationally designated wetlands are being conserved. Significant gaps remain in Fisheries and Oceans Canada's information on Pacific salmon stocks and habitat and in its knowledge about the potential effects of salmon aquaculture on aquatic ecosystems and wild salmon stocks. And in all but one of the development assistance projects we audited, indicators were not in place to monitor environmental sustainability. Numerous audits from previous years have found similar weaknesses in other programs.

23. Information on results is lacking even in the federal government's management of its own office solid waste. Though many initiatives are in place to recycle such waste, departments do not have the information needed to assess actual progress. The government as a whole does not know whether its 1990 target to reduce waste by 50 percent by 2000 has been met. Of the six departments and agencies we audited, only one—Canada Customs and Revenue Agency—could demonstrate that it is meeting specific commitments on solid waste management that it made in its sustainable development strategy. Cost-effective sampling approaches are possible, but most departments have not even defined how they propose to measure progress. The continued lack of ability to show progress brings into question the government's commitment to lead by example in its own operations.

Accountability

Performance, results, and consequences

24. This year's audits bring fresh evidence of pervasive holes in accountability for environment and sustainable development. A definition was proposed in the December 2002 Report of the Auditor General:

> Accountability is a relationship based on obligations to demonstrate, review, and take responsibility for performance, both the results achieved in light of agreed expectations and the means used.

25. One of the first critical links in the accountability chain—clearly defined expectations regarding performance and results—is often weak or missing. For example, in 1997, the Auditor General identified a need for more explicit operational objectives and targets for the sustainability of salmon stocks. In the continuing absence of a policy on wild salmon, Fisheries and Oceans Canada still lacks clear overall objectives and direction for salmon fisheries and resource management, despite evidence over the years that some salmon populations are in trouble.

26. In some of this year's other audits—those on official development assistance, international environmental agreements, and commitments to consider uses of the tax system—we also found that expectations had not been defined or were poorly framed. These findings echo past reports.

27. Subsequent links in the accountability chain are reviewing performance and results and taking corrective action. Our audit of international environmental agreements found that some departments could not demonstrate how they carry out their management oversight and review responsibilities. Our audit of strategic environmental assessment indicated that after 14 years, a good basis for improving the application of this tool has not been established because no formal evaluation has been made of impacts, barriers, or success factors. And a transit pass project, piloted by the federal government in response to a petition submitted to our Office, is being expanded without evaluating the costs relative to the benefits.

28. **Who takes responsibility, and what happens next, when results are not delivered?** Accountability is not sufficiently anchored in consequences for responsible officials. I am especially troubled when we find a lack of consequences for failing to implement direction that comes from the very centre of the federal government. The feeble response by many departments to Cabinet's directive on strategic environmental assessment is such a case. Our audit found that departments showing the most progress were those where senior management commitment was evident. Yet, in the 14 years since the directive was first issued, the federal government has not promoted this commitment by systematically reviewing whether departments are complying and by holding deputy ministers to account.

Looking forward: Leadership to match opportunity

Leadership is needed at all levels to overcome inertia and improve effectiveness

29. **One way that leadership can be shown is in taking action to fix the problems identified in our reports.** Providing clear and constructive responses to the recommendations in our reports is a step in demonstrating leadership. Against this criterion, the quality of the responses to this year's recommendations varies considerably. The departmental responses to our recommendations on the international environmental agreements we audited are generally clear and constructive, as is the overall Government of Canada response—a commitment to improve reporting and accountability for results of international environmental agreements in general. Assuming sufficient leadership to ensure implementation, these commitments should help the government better translate international environmental obligations into results for Canadians.

30. Similarly, responses to recommendations in our chapter on strategic environmental assessment show promise for fulfilling the potential of this important tool. For example, the accountability of senior officials for delivering on Cabinet's directive was clearly affirmed, and the Privy Council

Office (PCO) has committed to ensuring that by 2008 an evaluation of the Cabinet directive is completed that will include the status of its implementation. By taking a larger role in ensuring accountability for performance and results, central agencies such as the PCO and the Treasury Board Secretariat can stimulate departmental progress on environmental and sustainable development responsibilities.

31. At the same time, responses to some of the other recommendations from this year's audits suggest a lack of willingness to show leadership. For example, Finance Canada has indicated that it does not intend to go beyond the status quo in analyzing the potential of the tax system to advance sustainable development. Yet the tax system is clearly an important avenue for such advancement, and Finance Canada's departmental sustainable development strategy, like those of other departments, is meant to be a tool to promote convergence of the environmental and economic agendas. As another example, responses to our recommendations on office solid waste are silent on renewing the government's targets for waste management and are unclear in other respects.

32. **Systemic weaknesses in defining and delivering on environmental objectives can also be resolved with stronger leadership by senior departmental officials.** Our audits this year and in past years reveal wide-ranging inadequacies in relation to some important management basics. But we have also seen that where there is senior leadership there are benefits, including better sustainable development strategies and more decisive efforts to deliver on environmental commitments. No single department or agency provides a consistently strong example, but in our work over the years we have found Industry Canada and Natural Resources Canada among the departments that have often performed relatively well on these fronts.

33. **But management is simply the means to an end.** Leadership is also needed to better define the ends themselves—a sustainable Canada for Canadians! In the words of Prime Minister Paul Martin, "Sustainable development cannot be only a pious wish . . . it must be a fundamental pillar underlying the nature of economic growth." As many before have pointed out, this will require profound shifts from business as usual. Notwithstanding impressive pockets of innovation and progress, I do not see a lot of evidence of systematic efforts to promote such shifts or to encourage creative, entrepreneurial public servants who can recognize and exploit opportunities to advance sustainable development through their own organizations.

34. In sum, from what I have observed there is a pressing need for strong leadership to shift the government as a whole beyond a culture of incrementalism, to drive and harness creativity and innovation and to ensure results.

Charting a clear course for departmental sustainable development strategies

35. I believe that the sustainable development strategies required of federal departments (Exhibit 3) can be an important means of implementing the government's stated commitment to sustainable development. This was the intent when the government made the strategies a cornerstone of its approach and gave the Commissioner the mandate to monitor and report annually on progress against its commitments. But the government is not doing enough to ensure the growing or even the continued relevance of the strategies.

36. The federal government provided a good base for the first round of strategies in the 1995 *Guide to Green Government*, which was developed to help departments identify their sustainable development objectives and develop the action plans to achieve them. It was signed by the then-prime minister and his cabinet. It seems to me that since then, the quality of direction from the centre has not kept pace with needs and opportunities. No real successor to the Guide—reflecting its quality, direction, and profile—has been produced in the last 10 years.

37. My feeling, and I have heard the same from more than a few senior managers, is that if departments' investment in their strategies is to be effective, the government needs to send a stronger signal about the destination it intends to reach and the key milestones along the way.

Exhibit 3 **The new round of sustainable development strategies**

The third round of departmental sustainable development strategies was tabled in Parliament in February 2004. We reviewed the new strategies to determine the extent to which they met the expectations I outlined in 2003 (*Sustainable Development Strategies—Making a Difference*).

The quality of the strategies still varies widely. On the positive side, several of the strategies reflect a keener sense of clear, actionable direction. The majority include a vision statement, which in many cases indicates intended long-term outcomes. And targets in quite a few of the strategies are more clear and time-bound than in previous rounds. But to be able to assess progress, greater specificity is still needed in many cases, especially on the magnitude of change intended.

I note that some departments have been trying different approaches to make their strategies more effective, including linking them more directly to business planning. Innovation is generally a sign of engagement, so I am encouraged when I see signs of it. But it is important that sustainable development objectives and commitments not be lost in the shuffle. More broadly, I think it is critical that the government review lessons learned about process, content, and implementation in the years since the first strategies were introduced. It is important this be done soon, so that results will be available to improve the next round of strategies.

In the end, of course, what is important is not just how the strategies are built and positioned but what they contain and whether they are implemented. At first blush, I see some significant objectives and commitments. I also note that some strategies are still targetting formative efforts such as raising awareness among employees. I don't discount the need for such groundwork, but by the third round it is reasonable to expect more substantive goals and targets.

In 2005 and beyond, my focus in part will be on how the strategies are used to address selected issues that cut across departments, and how they tie into other federal action on these issues. I will continue to look at whether commitment—the nuts and bolts of the strategies—are being met.

Creating a federal sustainable development vision and strategy

38. It is simply not realistic to address all existing federal sustainable development commitments on an equal footing. While each department must scan a broad range of possible sustainable development issues and identify those relevant to its particular mandate, a clearly defined set of near-term and long-term federal priorities would ease the burden of sifting through the daunting mix of possibilities. It would also help to integrate direction on a range of related initiatives (Exhibit 4) and prompt more concerted attention to core issues across departments.

39. And so, at the risk of déjà vu among readers of previous years' reports, I strongly encourage the federal government to prepare both a compelling, explicit vision of a sustainable Canada and a government-wide strategy to realize the vision. Ministers, parliamentarians, public servants at all levels, and Canadians at large must be engaged in this work.

40. Mine is far from the only voice calling for a coherent strategy. In fact, the federal government itself has committed to a comprehensive strategy in key international forums. The task is challenging, but achievable. National governments of many countries (such as the United Kingdom, Germany, Sweden, Norway, Denmark, and Poland) and some regional organizations (the Baltic States, the European Union) have prepared and begun to implement government-wide, national, or regional strategies. Canada can join the ranks of these countries and regions.

Exhibit 4 **World summit commitments need to be addressed**

By definition, a federal sustainable development strategy should reflect relationships to other relevant policies and initiatives. The two global summits on sustainable development—the first held in Rio de Janeiro in 1992 and the second in Johannesburg in 2002—are key examples. The federal government deserves recognition for some positive contributions at these summits. It is also among the minority of governments that have been relatively consistent in responding to the reporting criteria of the Commission on Sustainable Development (the United Nations organization that is mandated to ensure follow-up on the summit agreements).

Unfortunately, there is still little evidence of a coherent plan to implement commitments made at Johannesburg. Since this summit, I have been tracking senior-level engagement in this issue. This has not been difficult. After two years, there is still no government-wide plan in place to address the commitments of priority to Canada. Though implementation of commitments from the summit was identified as one of three Government of Canada priorities for the new round of sustainable development strategies, only a handful of departments included specific summit commitments that they intend to address through their strategies.

In my 2002 Report, I called for a plan of action to implement commitments. At a minimum, as is the intended approach of some other countries, steps toward meeting key commitments can be explicitly built into the government-wide strategy.

Parliamentarians and senior government decision makers have important roles to play

41. **Parliament's role in holding the government to account is vital to progress on sustainable development.** Departments pay attention to parliamentary committee hearings. Committees can make a significant difference in progress on environmental and sustainable development issues, particularly when they regularly follow up to make sure departments take action.

42. Our reports are one tool to assist Parliament in holding government to account for environmental and sustainable development responsibilities. Thus, I am encouraged that parliamentary use of our work has been growing. Over the past year, House of Commons and Senate committees have held hearings on all four of our 2003 chapters. The Standing Committee on Environment and Sustainable Development has shown especially strong interest in our reports. I want to take this opportunity to thank the past chair of this committee, Charles Caccia, for his attention to our work.

43. The sustainable development strategies tabled in Parliament can be another important tool to track departments' roles in sustainable development. Given the range of departments and agencies required to prepare them, the strategies are relevant to most parliamentary committees. Committee hearings on departmental strategies could prompt departments to give them more weight.

44. **Parliament needs more and better information.** Based on our audits, I have concerns about constraints on the availability and quality of information for parliamentarians. For example, our findings indicate that parliamentarians can be put in the position of having to review proposed legislation without adequate information on potential environmental effects; and when they wish to determine progress on particular issues, information on results in relation to established objectives is often missing or weak. The audit chapters in this Report make recommendations to help address these problems.

45. **It is time for the deputy ministers' Environment and Sustainable Development Coordinating Committee to deliver.** A committee of deputy ministers—the Environment and Sustainable Development Coordinating Committee (ESDCC)—has overall responsibility for leadership and co-ordination of the government's efforts to promote sustainable development. This is a unique and powerful mandate, coming directly from the Clerk of the Privy Council. In my view, the Committee is falling short of its potential.

46. In addition to carrying out its stated intention to deliver a federal strategy, the Committee could take steps to make the departmental strategies more influential, relevant, and useful; for example, by championing a lessons learned exercise to help guide development of the next round of strategies. More generally, the Committee's leadership could help address some of the weaknesses identified in my reports, such as the underutilization of strategic environmental assessment.

Linking my work to global sustainable development initiatives

47. The federal government has endorsed many globally shared notions about key elements of sustainable development. Exhibit 5 highlights a handful of these elements that I think need serious attention if we are to build a sustainable future for Canada. As part of my planned 10-year retrospective in 2007, these elements will provide a basis for reflection on what our audits and related activities, taken together, tell us about federal progress on sustainable development.

48. Canada's engagement internationally has done more than connect us to a set of shared ideas about the elements of sustainable development—it has established concrete commitments to action. In our future work, we will continue to examine progress on selected international commitments, including those from the global summit process.

Did you know?

A growing number of national audit offices around the world are explicitly addressing environmental and sustainable development issues. Over the last three years, these offices collectively have undertaken about 400 environmental audits. We foster relationships with these offices through an international organization of audit offices and, in particular, through its environmental working group that we currently chair (www.environmental-auditing.org). To build broader awareness and understanding, we also network with other international institutions interested in the role of audit in sustainable development.

Exhibit 5 **Some key globally defined elements of sustainable development**

Precautionary approach. Where there are threats of serious or irreversible damage, cost-effective measures to prevent environmental degradation should not be postponed because of lack of full scientific certainty.

Coherent approach to sustainable production and consumption. Waste, pollution, and resource use in production processes must be reduced. But equally, consumption patterns of relatively wealthy populations of the world must be addressed.

Integrated approach to land and water resource management. Essential human needs, agricultural and industrial demand, and environmental protection should be addressed in balance; and planning and development processes must reflect natural boundaries.

Tools and levers. Extensive and effective use must be made of specific tools to improve decision making (such as environmental assessment) and to change behavior (including fiscal and economic measures such as tax restructuring and other incentives or disincentives).

Science and information. Understanding of environment-development interactions must be continuously improved, and this knowledge must be used more extensively and effectively in decision making and management.

Informing and engaging stakeholders. Education and capacity-building are underlying requirements for sustainable development. The needs range from promoting awareness of the impacts of personal choices to providing access to information on development impacts and options to enhancing local capacity to manage resources. Ultimately, it is about ensuring that people can participate in decisions affecting their environment.

Conclusion

49. Our audits this year indicate a need for senior management leadership in the public service to improve the use of decision-making and policy tools, monitoring and measurement, and accountability for results. In the absence of such leadership, future audits will continually re-identify these and similar issues. It is up to senior departmental officials to better use the opportunities available to advance sustainable development. In fact, current federal policies and commitments demand that they do so.

50. Just as important, the profound shifts needed to move sustainable development from a pious wish to a reality require

- a bold and compelling vision of a sustainable Canada that will engage Canadians,
- clear priorities for the federal government, and
- a demonstrated determination to make the vision real.

51. I am convinced this is possible—and essential, if Canada's economy is to remain innovative and competitive and if the quality of life enjoyed by Canadians is to remain among the highest in the world. I look forward to the day when leadership and creativity on environmental issues and sustainable development are found not just in pockets of the federal government but across it.

Appendix *Auditor General Act*—Excerpts

An Act respecting the Office of the Auditor General of Canada and sustainable development monitoring and reporting

INTERPRETATION

Definitions

2. In this Act,

"appropriate Minister"

"appropriate Minister" has the meaning assigned by section 2 of the *Financial Administration Act*;

"category I department"

"category I department" means

(a) any department named in Schedule I to the *Financial Administration Act*,

(b) any department in respect of which a direction has been made under subsection 24(3), and

(c) any department, set out in the schedule;

"Commissioner"

"Commissioner" means the Commissioner of the Environment and Sustainable Development appointed under subsection 15.1(1);

"sustainable development"

"sustainable development" means development that meets the needs of the present without compromising the ability of future generations to meet their own needs;

"sustainable development strategy"

"sustainable development strategy", with respect to a category I department, means the department's objectives, and plans of action, to further sustainable development.

DUTIES

Examination

5. The Auditor General is the auditor of the accounts of Canada, including those relating to the Consolidated Revenue Fund and as such shall make such examinations and inquiries as he considers necessary to enable him to report as required by this Act.

Idem

6. The Auditor General shall examine the several financial statements required by section 64 of the *Financial Administration Act* to be included in the Public Accounts, and any other statement that the President of the Treasury Board or the Minister of Finance may present for audit and shall express his opinion as to whether they present fairly information in accordance with stated accounting policies of the federal government and on a basis consistent with that of the preceding year together with any reservations he may have.

Annual and additional reports to the House of Commons

7. (1) The Auditor General shall report annually to the House of Commons and may make, in addition to any special report made under subsection 8(1) or 19(2) and the Commissioner's report under subsection 23(2), not more than three additional reports in any year to the House of Commons

(a) on the work of his office; and,

(b) on whether, in carrying on the work of his office, he received all the information and explanations he required.

Idem (2) Each report of the Auditor General under subsection (1) shall call attention to any thing that he considers to be of significance and of a nature that should be brought to the attention of the House of Commons, including any cases in which he has observed that

(a) accounts have not been faithfully and properly maintained or public money has not been fully accounted for or paid, where so required by law, into the Consolidated Revenue Fund;

(b) essential records have not been maintained or the rules and procedures applied have been insufficient to safeguard and control public property, to secure an effective check on the assessment, collection and proper allocation of the revenue and to ensure that expenditures have been made only as authorized;

(c) money has been expended other than for purposes for which it was appropriated by Parliament;

(d) money has been expended without due regard to economy or efficiency;

(e) satisfactory procedures have not been established to measure and report the effectiveness of programs, where such procedures could appropriately and reasonably be implemented; or

(f) money has been expended without due regard to the environmental effects of those expenditures in the context of sustainable development.

STAFF OF THE AUDITOR GENERAL

Appointment of Commissioner **15.1** (1) The Auditor General shall, in accordance with the *Public Service Employment Act*, appoint a senior officer to be called the Commissioner of the Environment and Sustainable Development who shall report directly to the Auditor General.

Commissioner's duties (2) The Commissioner shall assist the Auditor General in performing the duties of the Auditor General set out in this Act that relate to the environment and sustainable development.

SUSTAINABLE DEVELOPMENT

Purpose **21.1** The purpose of the Commissioner is to provide sustainable development monitoring and reporting on the progress of category I departments towards sustainable development, which is a continually evolving concept based on the integration of social, economic and environmental concerns, and which may be achieved by, among other things,

(a) the integration of the environment and the economy;

(b) protecting the health of Canadians;

(c) protecting ecosystems;

(d) meeting international obligations;

(e) promoting equity;

(f) an integrated approach to planning and making decisions that takes into account the environmental and natural resource costs of different economic options and the economic costs of differ ent environmental and natural resource options;

(g) preventing pollution; and

(h) respect for nature and the needs of future generations.

Petitions received

22. (1) Where the Auditor General receives a petition in writing from a resident of Canada about an environmental matter in the context of sustainable development that is the responsibility of a category I department, the Auditor General shall make a record of the petition and forward the petition within fifteen days after the day on which it is received to the appropriate Minister for the department.

Acknowledgement to be sent

(2) Within fifteen days after the day on which the Minister receives the petition from the Auditor General, the Minister shall send to the person who made the petition an acknowledgement of receipt of the petition and shall send a copy of the acknowledgement to the Auditor General.

Minister to respond

(3) The Minister shall consider the petition and send to the person who made it a reply that responds to it, and shall send a copy of the reply to the Auditor General, within

(a) one hundred and twenty days after the day on which the Minister receives the petition from the Auditor General; or

(b) any longer time, where the Minister personally, within those one hundred and twenty days, notifies the person who made the petition that it is not possible to reply within those one hundred and twenty days and sends a copy of that notification to the Auditor General.

Multiple petitioners

(4) Where the petition is from more that one person, it is sufficient for the Minister to send the acknowledgement and reply, and the notification, if any, to one or more of the petitioners rather than to all of them.

Duty to monitor

23. (1) The Commissioner shall make any examinations and inquiries that the Commissioner considers necessary in order to monitor

(a) the extent to which category I departments have met the objectives, and implemented the plans, set out in their sustainable development strategies laid before the House of Commons under section 24; and

(b) the replies by Ministers required by subsection 22(3).

Commissioner's report

(2) The Commissioner shall, on behalf of the Auditor General, report annually to the House of Commons concerning anything that the Commissioner considers should be brought to the attention of that House in relation to environmental and other aspects of sustainable development, including

(a) the extent to which category I departments have met the objectives, and implemented the plans, set out in their sustainable development strategies laid before that House under section 24;

(b) the number of petitions recorded as required by subsection 22(1), the subject-matter of the petitions and their status; and

(c) the exercising of the authority of the Governor in Council under any of subsections 24(3)to (5).

Submission and tabling of report

(3) The report required by subsection (2) shall be submitted to the Speaker of the House of Commons and shall be laid before that House by the Speaker on any of the next fifteen days on which that House is sitting after the Speaker receives it.

Strategies to be tabled

24. (1) The appropriate Minister for each category I department shall cause the department to prepare a sustainable development strategy for the department and shall cause the strategy to be laid before the House of Commons

(a) within two years after this subsection comes into force; or

(b) in the case of a department that becomes a category I department on a day after this subsection comes into force, before the earlier of the second anniversary of that day and a day fixed by the Governor in Council pursuant to subsection (4).

Updated strategies to be tabled

(2) The appropriate Minister for the category I department shall cause the department's sustainable development strategy to be updated at least every three years and shall cause each updated strategy to be laid before the House of Commons on any of the next fifteen days on which that House is sitting after the strategy is updated.

Governor in Council direction

(3) The Governor in Council may, on that recommendation of the appropriate Minister for a department not named in Schedule I to the *Financial Administration Act*, direct that the requirements of subsections (1) and (2) apply in respect of the department.

Date fixed by Governor in Council

(4) On the recommendation of the appropriate Minister for a department that becomes a category I department after this subsection comes into force, the Governor in Council may, for the purpose of subsection (1), fix the day before which the sustainable development strategy of the department shall be laid before the House of Commons.

Regulations

(5) The Governor in Council may, on the recommendation of the Minister of the Environment, make regulations prescribing the form in which sustainable development strategies are to be prepared and the information required to be contained in them.

Main Points of Chapters 1 to 6

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International Environmental Agreements

Chapter 1

Main Points

1.1 International environmental agreements reflect key government policies on important environmental issues, and Canadians should know what has, or has not, been achieved as a result of these agreements. We looked at five international environmental agreements to determine if the responsible federal departments know to what extent specific objectives of the agreements are being achieved. We noted that the departments have varying degrees of information on whether they are achieving the environmental objectives and results of their respective agreements.

1.2 We observed that for both the Montreal Protocol on Substances that Deplete the Ozone Layer and the Ozone Annex to the Canada-U.S. Agreement on Air Quality, the expected environmental results were defined and Environment Canada measures actual results against these expectations. In these two cases, the Department knows the extent to which it is achieving the environmental objectives we examined.

1.3 In the case of the International Convention on the Prevention of Pollution from Ships, the various federal pollution prevention programs and activities do not provide Transport Canada sufficient information on the status of ship oil pollution in Atlantic waters within Canadian jurisdiction. The issue with the United Nations Fish Stock Agreement is that although Fisheries and Oceans Canada knows the status of the fish stocks we looked at, it cannot always clearly demonstrate if stock conservation or rebuilding objectives are being achieved or if they are at the desired or sustainable level. The key challenge with the Ramsar Convention on Wetlands of International Importance is that Environment Canada has not clearly translated the Convention's conservation objective into what is expected to be achieved for Canada's 36 designated wetland sites.

1.4 Setting clear and quantifiable results expectations and then measuring results against those expectations can be a daunting challenge when dealing with complex environmental issues. Nevertheless, our examination of five international environmental agreements illustrates that

- where results expectations are well defined, departments are better positioned to know the extent to which agreement objectives and desired results are being achieved;
- where there are significant constraints or challenges to achieving the desired environmental results, better transparency is required in defining and communicating what results can reasonably be achieved; and

- while setting performance expectations and measuring results with respect to environmental issues can be difficult, it is nonetheless possible.

Background and other observations

1.5 International environmental agreements are important because they enable countries to work together to address vital environmental issues that are transboundary or global in nature, such as air pollution, climate change, protection of the ozone layer, and ocean pollution. In Canada, the quality of our environment depends not only on what we do at home but also on activities outside our borders. Our domestic actions alone are often insufficient to protect our environment, our resources, and our health. We need to work with other countries to develop common solutions to international environmental problems that impact us directly.

1.6 In recent years, the federal government embarked on an agenda to improve the effectiveness of public sector management and accountability, and committed to focus more on the results achieved through the use of public funds. Consistent with this, we looked at accountability for results in the context of five international agreements.

The departments have responded. The departments concerned—Environment Canada, Transport Canada, and Fisheries and Oceans Canada—accept our recommendations. The responses of each department, which follow the recommendations in the chapter, indicate what future action they plan to take to address these recommendations.

The Government of Canada has responded. As well, the Government of Canada accepts our recommendation pertaining to the accountability of lead federal departments for international environmental agreements. The government's response is presented following this recommendation (Chapter 1, paragraph 1.130).

Canadian International Development Agency

Development Assistance and the Environment

Chapter 2

Main Points

2.1 Access to safe and adequate water is one of the most pressing needs faced by people in developing countries. The Canadian International Development Agency (CIDA) has a number of projects and activities related to meeting this need. The projects we reviewed are changing the lives of beneficiaries for the better and are responding to identified community needs. Throughout our fieldwork, many people told us that CIDA was responsive to countries' needs. We found that CIDA programming documents reflect the expressed environment and sustainable development needs and priorities of the countries we visited.

2.2 CIDA is experimenting with different ways to ensure the long-term sustainability of its projects. It is seen to use a participatory approach to designing and implementing projects that emphasize local ownership and capacity development. The Agency now needs to monitor the long-term success of these experiments.

2.3 CIDA's overall approach to water issues lacks coherence. The Agency has not set out specific expectations and guidance for what it wants to accomplish, particularly in relation to water-related commitments contained in international agreements. There is little evidence that these commitments have had an explicit influence on country programming. Field personnel are unclear about which of the many, varied CIDA policy commitments they are expected to reflect in country programs and in projects. CIDA needs to update and rationalize its priorities and expectations and direct its efforts toward producing tangible results.

2.4 CIDA has made efforts to integrate environmental sustainability into its decision making, but it has not taken sufficient action to achieve its policy objectives. The processes and documentation we reviewed did not provide assurance that the projects we reviewed were designed in an environmentally responsible way. We observed examples of CIDA personnel doing a good job of incorporating environmental considerations into their projects. However, the Agency needs to develop tools and guidance to examine the environmental sustainability of all its projects and country programs.

2.5 CIDA lacks the performance measurement and reporting framework to reliably measure its overall progress on commitments related to water and environmental sustainability. The projects we reviewed identify indicators to measure immediate and long-term results and benefits, but there is no provision for actually doing the long-term measuring. Thus, the Agency cannot be sure of the sustainability of project results.

Background and other observations

2.6 As Canada's aid agency, the Canadian International Development Agency gave almost $2 billion in official development assistance to developing countries and multilateral organizations in 2002. These funds were targeted in a broad range of sectors, such as education, health, transport, energy, agriculture, and forestry. Sustainable development is at the core of CIDA's mandate.

2.7 CIDA operates in an international context, contributing to and working in collaboration with many other aid agencies, non-governmental organizations, international financial institutions, and UN agencies. The audit focussed on its country-based programming. The Agency has made and endorsed many commitments in support of environment and sustainable development through various conventions, protocols, declarations, and summits. These have established broad environmental goals and, in many cases, imposed obligations on developed countries such as Canada to assist developing countries.

2.8 Water concerns are prominent in several agreements, including Agenda 21 from the 1992 United Nations Conference on the Environment and Development, the Convention to Combat Desertification, and the Millennium Development Goals. These called for concerted action in the areas of drinking water supply, sanitation, water conservation, and integrated water resource management. Water issues have been a long-standing area of programming within CIDA.

2.9 The environment is a crucial part of development assistance. Within CIDA, the environment is both a sector of programming (for example, addressing biodiversity and pollution) and a formal cross-cutting theme. In its 1992 Policy for Environmental Sustainability, CIDA committed to integrating environmental considerations in all of its decision making and activities. Aid projects of all types have the potential to cause unintended harm and must therefore be properly planned and delivered. Moreover, aid projects and country programs present opportunities to advance other project goals through close attention to interactions between the environment, local economies, and societies.

The Agency has responded. The Agency has agreed with our recommendations. The Agency's responses, including the actions it is taking or intends to take to address the recommendations, are set out in the chapter

Sustainable Development Strategies
Using the Tax System and Managing Office Solid Waste

Chapter 3 Main Points

3.1 The federal departments and agencies we audited need to do more to meet their sustainable development commitments in two key areas: examining ways to use the tax system to better integrate the economy and the environment, and managing solid waste generated by federal offices.

3.2 **Using the tax system**. Finance Canada has analyzed a range of issues associated with its tax-related commitments. However, it has not clearly stated what it is trying to achieve with these commitments, in terms of the performance that is targeted or is expected to occur. Its approach to implementing these commitments has been piecemeal and fragmented, because key steps such as pinpointing the main areas that need analysis are missing. Consequently, it is not in a position to tell Parliament and Canadians the extent to which it has analyzed how the tax system impedes or favours the attainment of sustainable development.

3.3 A systematic review, based on risk, of key opportunities for using the tax system to better integrate the economy and the environment is an important step toward using the tax system as a tool for sustainable development.

3.4 **Managing office solid waste.** The six departments and agencies we examined made specific commitments to manage office waste in their 2001 sustainable development strategies. We found that all the offices we visited were recycling; however, the departments cannot demonstrate that they are meeting all of their commitments.

3.5 Waste management initiatives in departments are products more of provincial legislation, municipal programs, and the commitment of individuals, than of direction from the federal government. Due to a lack of reliable measurements and inconsistent feedback to building occupants on their waste management performance, departments and agencies are not likely achieving the level of performance that is possible. This is not the model of excellence the government desires.

3.6 In 1990 the federal government set a target to reduce its waste by 50 percent by 2000. No government-wide measurement strategy was implemented and responsibilities were not assigned. Today, the government does not know if it met its target. Central leadership is needed to set government-wide priorities and develop guidance, tools, and practices for managing solid waste within the context of greening government operations.

Background and other observations

3.7 The Commissioner of the Environment and Sustainable Development monitors and reports to Parliament on the progress of federal departments and agencies in implementing their sustainable development strategies.

3.8 **Using the tax system**. The tax system, by influencing the actions of Canadians, can have important direct and indirect impacts on the environment and sustainable development. As the department responsible for analysis and advice on the structure of the tax system, Finance Canada has the opportunity to influence sustainable development in Canada by better integrating the economy and the environment. In its *2001–2003 Sustainable Development Strategy*, the Department made three tax-related commitments for that purpose.

3.9 As part of the 2002 World Summit on Sustainable Development Plan of Implementation, the Government of Canada along with other countries agreed to pursue certain commitments to address environmental issues, while recognizing that the tax system can affect the environment.

Finance Canada has responded. The Department's responses to our recommendations are included in this chapter. The Department does not commit to any actions beyond those already in place or previously planned. These actions were already taken into account in our conclusion and recommendations. Consequently, the Department does not appear to accept our recommendations.

3.10 **Managing office solid waste.** As the largest single enterprise in Canada, the biggest landlord, and the largest owner of office property, the federal government generates significant amounts of waste, including recyclable materials such as paper, cardboard, metal, and glass. We audited the Canada Customs and Revenue Agency (now the Canada Revenue Agency and the Canadian Border Services Agency), Department of Justice, Environment Canada, Natural Resources Canada, Public Works and Government Services Canada, and Veterans Affairs Canada.

The Government of Canada has responded. The Government of Canada's responses to our recommendations are included in this chapter. The government has indicated the actions it is taking or planning to take to address our recommendations. However, it has not clarified whether and how it plans to address the specifics of our recommendations. For example, the government does not address the renewal of its targets on waste management.

Assessing the Environmental Impact of Policies, Plans, and Programs

Chapter 4

Main Points

4.1 Overall, our audit found a low level of commitment in departments and agencies toward conducting strategic environmental assessments, despite the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals, which was first issued 14 years ago. The results of our audit, taken together, suggest that most departments have not made serious efforts to apply the directive. In fact strategic environmental assessment is far from meeting its promise in guiding policy, plan, and program development.

4.2 We found major gaps in how the directive is being applied. A number of the 12 departments we examined have put in place few of the basic management systems needed to comply with the directive. The three departments we evaluated in detail have conducted few strategic environmental assessments in the years we examined (2000, 2001, and 2002), and their completeness varies. Tracking of assessments has been inadequate, so departments cannot show that they have conducted all of the strategic environmental assessments required.

4.3 The overall application of the directive does not provide assurance that environmental issues are assessed systematically, so ministers and the Cabinet can receive sufficient information to make informed decisions on proposed policies, programs, and plans. Knowing the potential environmental impacts in advance would provide an early opportunity to adjust or modify their approach to protect the environment and human health, and to reduce future economic costs.

4.4 A number of main factors are adversely affecting the performance of departments and agencies in implementing this directive. We found insufficient commitment by senior management in some departments, which impedes the development of necessary management systems to implement the directive. In addition, no central department or agency has been tasked with the responsibility and authority to monitor the departments' and agencies' compliance with the directive and to ensure that there is adequate quality control of the assessments that are undertaken. There is limited integration of assessments into decision making.

4.5 The 1999 Cabinet directive does not require assessments to be made public, but in January 2004 a public reporting requirement was introduced. Since 1999, few of the assessments completed have been made public.

4.6 Some departments have made progress in implementing the directive since 1999. We observed examples of senior management commitment and leadership in some departments (Transport Canada, Industry Canada, Natural Resources Canada, and the Department of Foreign Affairs and International Trade). We also observed some examples of good practices that could be emulated by departments and agencies to improve their compliance with the directive.

Background and other observations

4.7 The federal government has indicated it is committed to environmental excellence in its own operations and to the goal of sustainable development. According to the Clerk of the Privy Council, "the Government of Canada is committed to integrating sustainable development in its plans, policies and programs." He notes that "this requires that decision-makers have good information and advice on the potential environmental, social and economic impacts of proposed initiatives."

4.8 In line with these commitments, the Cabinet directed federal departments and agencies, through a directive, to conduct the environmental assessment of new proposed policies, programs, and plans, so that informed decisions can be made about them.

4.9 Within the directive, ministers expect federal departments and agencies to assess the potential environmental impact of initiatives bound for Cabinet or ministerial approval. They "expect strategic environmental assessments to be conducted . . . when a proposal may result in important environmental effects, either positive or negative."

The government has responded. The departments and agencies have generally agreed with our recommendations. Their responses, including the actions they are taking or intend to take to address the recommendations, are set out in the chapter.

Fisheries and Oceans Canada

Salmon Stocks, Habitat, and Aquaculture

Chapter 5

Main Points

5.1 Overall, we are not satisfied with the progress made by Fisheries and Oceans Canada in responding to the recommendations we made in the three previous audits in 1997, 1999, and 2000. While many stocks are abundant, some Atlantic and Pacific salmon stocks are in trouble. We continued to identify significant gaps in managing risks.

- The Department has not finalized the Wild Salmon Policy, which would set out clear objectives and guiding principles. The policy would also bring together biological, economic, and social factors—for fisheries and resource management, habitat protection, and salmon enhancement.
- There are shortcomings in information on salmon stocks and habitat and scientific knowledge on the potential environmental effects of salmon aquaculture in aquatic ecosystems.
- There are weaknesses in regulatory approvals, enforcement, and monitoring of salmon aquaculture operations. This includes approving aquaculture site applications, assessing cumulative effects, and monitoring salmon aquaculture operations to prevent harmful destruction of habitat.
- There has been inadequate co-ordination between federal and provincial governments in managing fish habitat, undertaking research, approving aquaculture site applications, and sharing information.

Background and other observations

5.2 Atlantic and Pacific salmon are a vital part of life on the east and west coasts of Canada. They generate a wide range of economic, social, and cultural benefits for Canadians. Maintaining biologically-diverse and abundant salmon stocks is important in preserving this unique part of Canada's heritage.

5.3 Management of the salmon resource and its fisheries is very complex. This complexity is due to several factors: the biology and behaviour of salmon; the large number of stocks; the competing demands and diverse interests of environmental organizations, First Nations, the commercial fisheries industry, the recreational communities, and other stakeholders; ongoing First Nations treaty negotiations; changing climatic and ocean conditions; and changes to wild salmon habitat. In addition, the recently enacted *Species at Risk Act* introduces new protection requirements.

5.4 Fisheries and Oceans Canada has the responsibility and legislative authority under the *Fisheries Act* to ensure that salmon and their habitat are protected. The Department is also the lead federal agency for the development of aquaculture. In British Columbia, the federal and provincial governments share responsibility for conserving and protecting wild salmon and their habitat. The federal and provincial governments also share responsibility for regulating salmon aquaculture in British Columbia and New Brunswick.

5.5 In previous years, we conducted three audits on the management of Pacific salmon. In 1997, we reported that Pacific salmon stocks and habitat were under stress. In 1999, we found that Pacific salmon fisheries were in trouble. The long-term sustainability of the fisheries was at risk because of overfishing, habitat loss, and other factors. In 2000, we reported that Fisheries and Oceans Canada was not fully meeting its legislative obligations to protect wild Pacific salmon stocks and their habitat from the effects of salmon aquaculture operations.

5.6 In 2003, we revisited the Department to assess its progress in conserving and protecting salmon stocks and their habitat, ensuring sustainable use of salmon fisheries resources, and regulating salmon aquaculture in British Columbia. We also looked at salmon aquaculture in New Brunswick as well as the current situation with Atlantic salmon stocks in the Maritime provinces.

5.7 In response to the financial pressures it faces, the Department completed a Departmental Assessment and Alignment Project to assess all its policies, programs, and activities during our audit. As well, it has been working to assess all its expenditures, to identify ways to work more efficiently, and to modernize management and financial planning processes. These activities are expected to result in a more risk-based approach to managing areas such as stock assessment, habitat, and aquaculture. We did not audit these activities.

The Department has responded. Fisheries and Oceans Canada's responses to our recommendations are included in this chapter. The Department has accepted all our recommendations and has provided individual responses. The responses include statements of actions already under way or planned to address the recommendations.

Environmental Petitions

Chapter 6 Main Points

6.1 In most cases, departments have responded to complaints raised in petitions about alleged violations of federal environmental laws by promising to launch investigations. However, petitioners are seldom informed of the outcome of these actions and the end result of their petition.

6.2 The audits we conducted of strategic environmental assessment and the management of salmon, which are discussed in chapters 4 and 5 of this report, provided an opportunity to verify departmental claims in selected petition responses. We found that in these cases, some departments portrayed a more positive situation in their petition response than was warranted.

6.3 Our audits of commitments from past petition responses concerning historic military dumpsites off Canada's Atlantic Coast and a pilot project to encourage federal public servants to use urban transit found that progress had been made in translating commitments into concrete action. However, our audit of a commitment stated in a petition response by Fisheries and Oceans Canada revealed that the Department had made limited progress toward developing regulations on genetically engineered fish.

Background and other observations

6.4 This is our annual report to Parliament on the environmental petitions process as required by the *Auditor General Act*. The Commissioner of the Environment and Sustainable Development co-ordinates the petitions process on behalf of the Auditor General.

6.5 Our Office received a total of 40 petitions this year (compared with 38 last year). They came from most parts of the country, with the majority from individuals and local groups and some from national organizations. The petitions covered issues such as trawler dragging on the ocean floor, biotechnology, and pesticide advertising. New issues included the quality of drinking water and other environmental problems on an Aboriginal reserve, environmental fines under the federal tax system, and a hazardous waste incinerator project. The full text of petitions and responses can be found in the petitions catalogue on our Web site (www.oag-bvg.gc.ca/domino/petitions.nsf/english).

The departments have responded. Fisheries and Oceans Canada and Transport Canada have accepted our recommendations. Their responses, which follow the recommendations in the chapter, indicate the actions they intend to take and when these will be completed.

Report of the
Commissioner of the Environment and Sustainable Development to the House of Commons—2004

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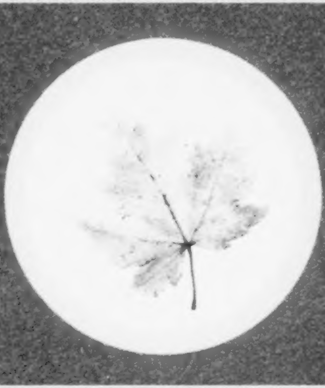
Chapter 6	Environmental Petitions

2004



Report of the

Commissioner of the Environment and Sustainable Development

to the House of Commons

Chapter 1

International Environmental Agreements

Office of the Auditor General of Canada

2004

Report of the
Commissioner of the Environment and Sustainable Development
to the House of Commons

Chapter 1
International Environmental Agreements

Office of the Auditor General of Canada

The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters, and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

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Chapter

1

International Environmental Agreements

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

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International Environmental Agreements

Main Points

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1.4 Setting clear and quantifiable results expectations and then measuring results against those expectations can be a daunting challenge when dealing with complex environmental issues. Nevertheless, our examination of five international environmental agreements illustrates that

- where results expectations are well defined, departments are better positioned to know the extent to which agreement objectives and desired results are being achieved;
- where there are significant constraints or challenges to achieving the desired environmental results, better transparency is required in defining and communicating what results can reasonably be achieved; and

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Introduction

International environmental agreements

1.7 **Importance of environmental agreements.** Because many environmental issues such as air pollution, deterioration of the ozone layer, climate change, and ocean pollution are transboundary or global in nature, countries cannot achieve desired results by acting alone. Countries have increasingly recognized this and have developed a wide range of international environmental agreements to enable them to work together on global environmental issues.

1.8 In Canada, the quality of our environment depends not only on what we do at home but also, increasingly, on activities outside our borders. Our domestic actions are often insufficient to protect our environment, our resources, and our health. We need to work with other countries to develop common solutions to international environmental problems that have a direct impact on us. As one of the largest countries in the world, rich in natural resources, Canada has much to gain from the environmental commitments made by its neighbours and the international community.

Did you know?

In 2001, the United Nations Environment Programme reported that "there were over 500 international treaties and other agreements related to the environment. . . . Nearly 60 percent date from 1972, the year of the Stockholm Conference, to the present."

1.9 **Historical context.** International agreements on boundary waters and commercially valuable wildlife such as whales, seals, and fish date back to the late 1800s. However, there were few such agreements until the second half of the 20th century. In 1972, the United Nations Conference on the Human Environment, held in Stockholm, marked the beginning of a comprehensive international effort to protect, preserve, and enhance the environment. Several important environmental agreements have been negotiated since then.

1.10 In addition to their growing number, international environmental agreements have also increased in scope and complexity. While earlier agreements focussed on a limited number of topics, recent agreements address a much broader range of issues. As well, the terms and conditions of recent agreements are generally more comprehensive and rigorous and cover a wider range of obligations.

1.11 Since 1972, Canada has often played a key role in shaping the international environmental agenda and has endorsed a growing number of international agreements and similar instruments dealing with various environmental issues. Canada's environmental commitments to the international community have grown, and the number and complexity of our agreements have increased.

1.12 **Management challenges.** Governments around the world face the challenge of managing a growing body of increasingly complex international environmental agreements. According to other national audit offices, the assessment of the implementation, compliance, and effectiveness of these agreements is complicated and often plagued by various problems. Despite their growing importance, little is known about many countries' implementation of, and compliance with, these agreements.

1.13 In Canada, adequate information is not always available to Parliament and to Canadians on the progress achieved under our agreements. In our 1998 Report, Chapter 2, Working Globally—Canada's International Environmental Commitments, we reported that Canada did not always have an overall picture of how good a job it was doing at meeting the international environmental obligations it had undertaken.

Accountability for results

1.14 **Results for Canadians.** Historically, management within the federal government has primarily focussed on resources and what it spends (inputs), what it does (activities), and what it produces (outputs). While these are important, it is not sufficient to report on only these elements. Being able to measure and report on results achieved (outcomes) from government policies, programs, and services is essential in order to be accountable to Parliament and Canadians.

1.15 In recent years, the federal government has embarked on an ambitious agenda to improve the effectiveness of public sector management and accountability. This agenda is reflected in several significant initiatives, including *Results for Canadians*, which set out the government's management framework. In *Results for Canadians*, the government emphasized its commitment to focus on results achieved through the use of public funds.

Accountability. A relationship based on obligations to demonstrate, review, and take responsibility for performance, both the results achieved in light of agreed expectations and the means used.

1.16 Since international environmental agreements reflect federal government policy on important environmental issues, Canadians should know what has, or has not, been accomplished as a result of these agreements. Consistent with the federal agenda and commitments, we set out to look at accountability for results of selected international environmental agreements.

1.17 **Responsibility of lead departments.** For each agreement, a federal government department is identified as the lead department primarily responsible for that agreement. Normally, the lead department is identified as part of the consultation process leading up to Canada's ratification of an agreement. Publications such as Environment Canada's *Compendium of International Environmental Agreements* and Foreign Affairs Canada's database of international environmental agreements (available through the Department's Web site) list lead departments.

1.18 Despite the designation of a lead department for each international environmental agreement, there are no common mechanisms to formally define and delegate the responsibilities of lead departments. The essence of the lead department's role is normally grounded in the mandate of the department and in the related responsibilities of the minister. Also, the federal cabinet documents that authorize the negotiation and ratification of agreements (such as memoranda to cabinet and records of decisions) may identify the lead department and, to some extent, describe its role. However, cabinet documents are, by law, not accessible to the public or to members of Parliament and therefore are not transparent enough for accountability purposes.

1.19 **Performance expectations.** Setting clear, quantified, and time-bound performance expectations is an essential cornerstone of effective accountability. Departments cannot be held accountable for achieving results unless those results are adequately defined to begin with. However, setting expectations, and then measuring actual results against those expectations, can be a daunting challenge when dealing with complex environmental issues.

1.20 As mentioned previously, the federal government has been working to improve its management effectiveness and accountability. It has developed a number of management frameworks and other tools that could assist lead departments in defining the results expected under international environmental agreements and in managing to achieve those results.

1.21 The results-based management accountability framework is an example of such a tool. It provides a blueprint for measuring and reporting on outcomes of individual policies, programs, and other initiatives. This framework helps to describe clear roles and responsibilities; to ensure a logical design that links activities, outputs, and outcomes; to determine appropriate performance measures and measurement strategy; and to ensure adequate reporting on outcomes. It also provides for the development of an evaluation strategy.

1.22 The government's policy on transfer payments requires the use of a results-based management accountability framework as a component of any federal grant or contribution funding program. Also, the government generally encourages its use for major policies, programs, and initiatives. However, there are no other formal requirements to use this framework or similar tools. The onus is on the responsible lead departments to use the means or tools necessary to define the expected environmental results and performance for their agreements.

1.23 **Reporting on results.** Effective accountability requires that actual results achieved be measured, compared with expectations, and reported. Departmental reports on plans and priorities and departmental performance reports are the two principal means through which federal departments report to Parliament on planned results and results achieved. Departments may report on the results achieved in relation to their international environmental agreements through other means, such as periodic reports to the convention secretariats, other publications, or their Web sites. However, departmental performance reports are the primary and most commonly recognized vehicle for reporting results and performance to Parliament.

1.24 Departmental performance reports must also strive to be concise and well understood by Canadians. Given that, they are not intended to be comprehensive or to present exhaustive information on everything a federal department does. Competing priorities often make it difficult to report on all noteworthy programs and initiatives. Accordingly, there is no assurance that lead departments will use their departmental performance reports to report on results of international environmental agreements. Nonetheless, the Treasury Board of Canada Secretariat encourages departments to direct readers, through their departmental performance reports, to other publications or Web sites where they can find more complete performance information.

1.25 **Review and oversight.** Measuring and reporting environmental results are very important, but do not necessarily ensure that Canada is achieving the environmental outcomes desired under international agreements. There must also be proper management oversight to review results against expectations, identify difficulties and constraints to meeting those expectations, and take any necessary corrective action.

1.26 Responsibility for review and oversight of Canada's performance under an international environmental agreement rests primarily with the minister responsible for the agreement, consistent with ministerial responsibilities and accountability. In practice, senior management under the responsible minister would normally perform these functions.

1.27 In addition, the Treasury Board of Canada and its Secretariat are the federal government's management board. The Secretariat has a central oversight role for government-wide management practices and for ensuring value for money. The Secretariat also supports the activities of the Expenditure Review Committee of Cabinet, which is conducting an ongoing review of all government expenditures, management and operations. This is intended to provide a better understanding of program results and services that can be delivered with existing resources, and identify opportunities to realign resources to higher priorities. Treasury Board Secretariat officials indicated that the expenditure review process will likely include all departmental activities, including those pertaining to international environmental agreements. After completion of our audit, the Secretariat informed us that, following the 2004 federal election, the Privy Council Office was given the task to provide support to the Expenditure Review Committee, which is now a sub-committee of the Treasury Board.

1.28 Ultimately, Parliament has the primary role in overseeing government policies, activities, and resources, including the fulfilment of ministerial responsibilities. This oversight is exercised largely through the work of various House and Senate committees. However, Parliament needs appropriate results-based information in order to effectively oversee and hold the government to account for results. The government acknowledges that improved reporting to Parliament remains an ongoing challenge.

Focus of the audit

1.29 This audit was based on the principles of accountability to Parliament and results for Canadians, and examined how the Canadian federal government is accountable for the results of its international environmental agreements. We selected five agreements to use as audit case studies. We chose agreements that reflect different and important environmental topics and embody clear environmental objectives. We also focussed on agreements that have clear repercussions for the Canadian environment and for which the federal government is primarily responsible within Canada. The

Titles of agreements

The full titles of the five international environmental agreements appear in their respective case study sections, under Observations and Recommendations.

international environmental agreements selected (and responsible lead federal departments) are the following:

- The Montreal Protocol on Substances that Deplete the Ozone Layer (Environment Canada)
- The Ozone Annex to the Canada–U.S. Agreement on Air Quality (Environment Canada)
- The International Convention for the Prevention of Marine Pollution from Ships—MARPOL (Transport Canada)
- The United Nations Fish Stocks Agreement—UNFA (Fisheries and Oceans Canada)
- The Convention on Wetlands of International Importance Especially as Waterfowl Habitat—Ramsar (Environment Canada)

1.30 Knowing whether the agreements' environmental objectives and desired results are being achieved is a prerequisite for effective accountability. Thus, we set out to determine whether the responsible lead federal departments know the extent to which specific objectives of the selected international environmental agreements are being achieved. In order to do so, we examined whether the departments have information on the environmental results achieved relative to the objectives the government committed to, and whether they could demonstrate adequate assurance on the quality of this information. For each of the five international environmental agreements, we chose one key environmental objective of the agreement to examine.

1.31 The scope of the audit was limited to what is described in the preceding paragraph. We did not audit the government's compliance with the international environmental agreements, the effectiveness of the programs or means used to achieve its objectives, the pace or progress in addressing environmental issues, or the accuracy or quality of the information used by the departments. As well, the context and difficulties of each agreement we examined differ, and for this reason care should be taken not to generalize our findings to all of Canada's international environmental agreements.

1.32 For additional information on the objectives and scope of the audit, see **About the Audit** at the end of this chapter.

Observations and Recommendations

Montreal Protocol

Protecting the ozone layer

1.33 **The issue.** The ozone layer in the Earth's stratosphere is crucial to life on this planet. It protects living things from the harmful effects of the sun's ultraviolet radiation. Located 15 to 35 kilometres above the Earth's surface, the ozone layer absorbs all but a small fraction of harmful ultraviolet radiation from the sun. Because of this, stratospheric ozone is considered good ozone. In contrast, ozone closer to the Earth's surface is considered bad because it can be harmful to humans, plants, and animals.

Ozone-depleting substances

- chlorofluorocarbons (CFCs)
- halons
- carbon tetrachloride
- methyl chloroform
- hydrochlorofluorocarbons (HCFCs)
- methyl bromide

1.34 Today there is scientific consensus that certain manufactured chemicals, known as ozone-depleting substances, are responsible for reducing the ozone layer. Ozone depletion results in increased levels of ultraviolet-B (UV-B) radiation at the earth's surface and can cause substantial health problems. UV-B radiation causes skin cancers, and other potential health risks include eye diseases and immune system deficiencies.

1.35 The effects of ozone-depleting substances emissions do not respect geographic or jurisdictional boundaries. Emissions from abroad affect the ozone layer over Canada in the same manner as emissions at home. Solutions require international collaboration and actions on a global scale.

1.36 **The agreement.** In 1987, Canada signed The Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol). The Montreal Protocol seeks to protect the ozone layer by taking measures to control, and ultimately eliminate, substances that deplete it. Since it came into force in 1989, 187 countries have become parties to the Montreal Protocol. It also has been modified on several occasions by adding new ozone-depleting substances and by accelerating the phase-out of existing ones. Although most governments have ratified the Montreal Protocol, ratification of the subsequent amendments and their stronger control measures lags. Canada has ratified all the amendments.

1.37 **The lead department.** In Canada, the federal and provincial governments share responsibility for protecting the ozone layer. Environment Canada is the lead federal department responsible for putting into place the regulations and controls needed to meet Canada's obligations under the Montreal Protocol. The provinces and territories are mainly responsible for the recovery and recycling of ozone-depleting substances.

1.38 Environment Canada implements the provisions of the Montreal Protocol through the Ozone Depleting Substances Regulations under the *Canadian Environmental Protection Act*. These regulations, administered and enforced by Environment Canada, include controls on the manufacture, import, and export of various ozone-depleting substances.

Phasing out ozone-depleting substances

1.39 **What we looked at.** We set out to determine whether Environment Canada knows to what extent Canada is achieving the targeted consumption phase-out of hydrochlorofluorocarbons (HCFCs) and methyl bromide. In addition, we looked at the information Environment Canada has on the environmental results of reducing the consumption of ozone-depleting substances.

Consumption—The production plus imports minus exports of a controlled substance.

Production—The amount of a controlled substance produced, minus the amount destroyed by approved technologies and minus the amount used in the manufacture of other chemicals.

1.40 Under the Montreal Protocol, Canada's obligations to reduce the consumption of ozone-depleting substances include

- HCFC levels frozen in 1996, reduced by at least 35 percent by 2004, by 65 percent by 2010, 90 percent by 2015, 99.5 percent by 2020, and 100 percent by 2030; and

- methyl bromide levels frozen in 1995 (at 1991 base level), reduced at least 25 percent by 1999, 50 percent by 2001, 70 percent by 2003 and 100 percent by 2005.

1.41 **Ozone-depleting substances consumption.** Environment Canada gathers information on HCFCs and methyl bromide consumption in Canada through the reporting requirements of the Ozone-Depleting Substances Regulations. Environment Canada has processes and controls in place to assure the accuracy of the consumption data it collects and reports annually to the United Nations Environment Programme. The Department has stated that it believes the information to be of adequate quality and free of any important errors. According to the 2003 data that Environment Canada submitted to the Programme, Canada has, to date, met all its consumption reduction obligations for HCFCs and methyl bromide (Exhibit 1.1).

Did you know?

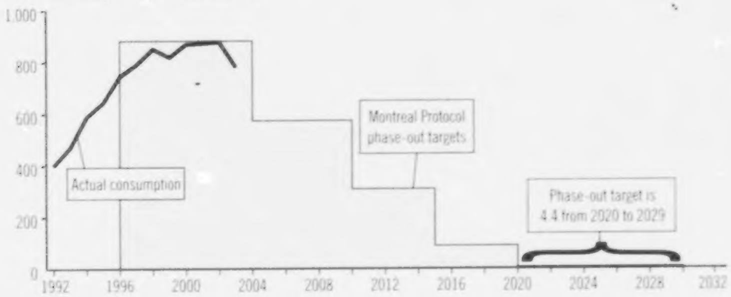
Hydrochlorofluorocarbons (HCFCs) are chemicals that have been increasingly used as replacements for chlorofluorocarbons, mainly in refrigeration and foam-blowing applications. Although both are ozone-depleting substances, HCFCs are much less damaging to the ozone layer.

Methyl bromide is a chemical used in soil fumigation and in the fumigation of some food storage and production facilities.

Exhibit 1.1 **Canadian consumption of hydrochlorofluorocarbons (HCFCs) and methyl bromide**

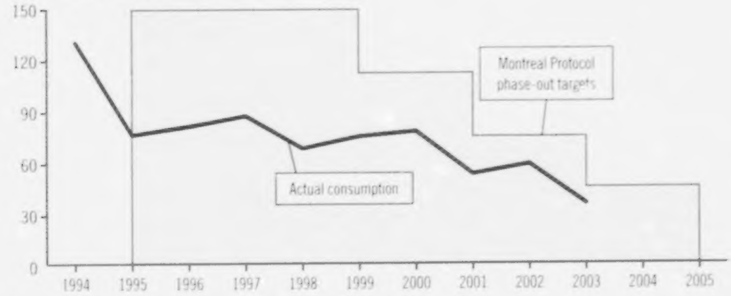
Canadian consumption of HCFCs

Ozone-depleting potential (tonnes)



Canadian consumption of methyl bromide

Ozone-depleting potential (tonnes)



Source: UNEP and Environment Canada

1.42 **Impacts of ozone-depleting substances reductions.** Environment Canada also obtains information from international sources on different environmental aspects and impacts of reduced consumption of ozone-depleting substances. Scientific information comes from reports of the Scientific Assessment Panel of the Montreal Protocol. The Panel is comprised of international experts from countries, including Canada, that are parties to the Montreal Protocol. These reports are peer reviewed and are used by the parties as a basis for decisions. According to these reports:

- **Levels of ozone-depleting substances in the atmosphere.** The total combined effective abundance of ozone-depleting compounds in the lower atmosphere continues to decline slowly from their peak in 1992–1994.
- **Stratospheric ozone.** The ozone layer has not yet begun to recover. Scientists predict the ozone layer will slowly recover over the next 50 years as concentrations of ozone-depleting compounds decline. Failure to comply with the Montreal Protocol would delay, and could prevent, the recovery of the ozone layer.

Achieving targets

1.43 Environment Canada knows the extent to which HCFCs and methyl bromide are being phased out in Canada, and Canada is meeting the current targets of the Montreal Protocol. We also observed that Environment Canada has information on related environmental results, including data on the concentration of ozone-depleting substances in the atmosphere and the status of the ozone layer.

Ozone Annex

Air pollution and smog

1.44 **The issue.** Although ground-level ozone is the same substance as stratospheric ozone, its effect on Earth's population and environment is harmful rather then beneficial. Ground-level ozone, which occurs in small amounts just above the Earth's surface, can cause serious respiratory problems in humans and animals. Ground-level ozone also can damage plants, field crops, and forests. When combined with fine airborne particles, ground-level ozone creates smog, which is harmful to human health. (For more information on smog, see our 2000 Report, Chapter 4, Smog—Our Health at Risk.)

1.45 Ground-level ozone is a secondary-source pollutant. It is produced when two primary pollutants or precursors—nitrogen oxides (NOx) and volatile organic compounds (VOC)—react in sunlight and stagnant air. These pollutants come from human activities as well as from natural sources. NOx in the atmosphere comes mainly from sources such as burning coal, gas, and oil in motor vehicles, homes, industries, and power plants. VOC emissions result mainly from gasoline combustion, the evaporation of liquid fuels and solvents, and from oil and gas refineries. NOx, VOC, and ground-level ozone can be transported over many hundreds of kilometres, depending on weather conditions.

1.46 **The agreement.** In December 2000, Canada signed the Protocol between the Government of Canada and the Government of the United States of America Amending the Agreement between the Government of Canada and the Government of the United States of America on Air Quality, simply referred to as the Ozone Annex. The Ozone Annex aims to reduce

Quebec with smog—10 September, 2002 at 3:32 p.m.

Quebec without smog—24 September, 2002 at 3:45 p.m.

Photos: Roger Lemire, Quebec Ministry of the Environment

transboundary air pollution through the reduction of emissions of ozone precursors in its designated area—in Canada: central and southern Ontario and southern Quebec. The long-term objective of the Ozone Annex for Canada is that ground-level ozone concentrations not exceed the Canada-Wide Standards for ozone.

1.47 **The lead department.** The federal government and the provinces of Ontario and Quebec share responsibility for implementing the Ozone Annex. Environment Canada is the lead federal department responsible for the emissions regulations and controls required by the Ozone Annex. Implementation of the Annex requires that the three governments develop or amend several regulations. Currently, 9 of the 12 required federal regulations have been put in place or amended, and the remainder are under development.

Reducing ground-level ozone

1.48 **What we looked at.** We examined whether Environment Canada knows the extent to which Canada is achieving the estimated reduction in emissions of NOx and VOC, as specified in the Ozone Annex. In addition, we looked at the related information Environment Canada has on the environmental impacts or results of the emissions reductions.

1.49 **Emissions estimates.** The obligations set out in the Ozone Annex focus on the measures and regulations to achieve reductions in emissions of NOx and VOC. The Ozone Annex also presents initial quantitative estimates of the emissions reductions to be achieved. These initial reductions were not intended to be binding, and the Department indicated the related emissions inventory and methods were intended to be improved and the estimates updated over time. The estimated reductions, from 1990 levels, predicted for Canada are

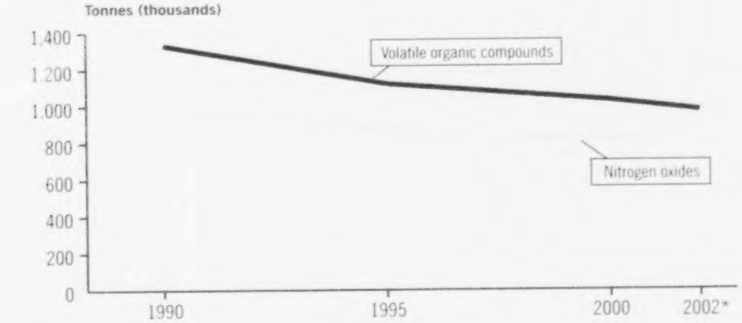
- NOx emissions by 39 percent in 2007 and 44 percent in 2010, and
- VOC emissions by 18 percent in 2007 and 20 percent in 2010.

However, Environment Canada also presented the 2010 reduction estimates as targets in its 2003–04 Report on Plans and Priorities. In addition, in the agreement it was initially expected that actual emissions reductions achieved would be greater than these estimates.

1.50 Environment Canada maintains a detailed inventory of NOx and VOC emissions sources, organized by several categories and sectors. The inventory categories are industrial sources, non-industrial fuel combustion, transportation, incineration, open sources, and miscellaneous. These categories break down into numerous sectors. For example, the transportation category includes sectors such as heavy- and light-duty diesel and gasoline trucks, air transportation, marine transportation, and motorcycles.

1.51 The Department uses the emissions inventory as the basis for compiling estimates of actual emissions, using different methods and source data for the different categories and sectors. The most recent complete emissions estimates are for the year 2000, and the Department is completing the 2002 estimates. The following exhibit shows the estimated emissions of NOx and VOC for 1990 to 2000 and the projection for 2002 (Exhibit 1.2).

Exhibit 1.2 **Emissions of nitrogen oxides and volatile organic compounds for the area in Canada designated by the Ozone Annex**



* projected emissions

Source: Environment Canada

1.52 The compilation of the emissions estimates is well documented. Environment Canada publishes an emissions inventory guidebook that provides detailed information on the sectors, methods used, and data references. Many of the methods used by Environment Canada are comparable with those used by the U.S. Environmental Protection Agency or the member countries of the United Nations Economic Commission for Europe. As well, the two parties to the Ozone Annex are obliged to develop common definitions of emission categories and common levels of aggregation for reporting emissions. Environment Canada has stated that it believes the information on estimated emissions of NOx and VOC is of adequate quality and free of important errors.

1.53 Using the emissions inventory and estimates, Environment Canada also produces projections of future NOx and VOC emissions. The most recent projections available at the time of our audit did not include all the reductions expected to result from implementing the Ozone Annex. Environment Canada indicated it was working to update its projections to reflect the impacts of all reductions.

1.54 Environment Canada's current emissions estimates and projections are based on changing emissions inventory and methods that reflect evolving knowledge of emissions of ozone precursors. The current emissions projections suggest that the initial reduction targets will be exceeded for VOC but will not be met for NOx. However, the Department confirmed that these differences with past targets are partly caused by the necessary changes in the emissions inventory and methods. Department officials indicated that their primary focus is on estimating the impacts of the various emissions reduction measures, and not on meeting the reduction targets presented in the Report on Plans and Priorities, which were intended as initial estimates.

A National Air Pollution Surveillance Network station

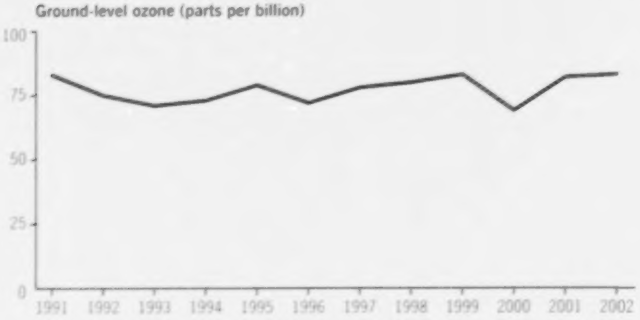
Photo: Anthony Scullion Photography

1.55 **Air quality monitoring.** The key environmental objective of the Ozone Annex is for Canada to achieve the Canada-Wide Standards for ozone concentration by the year 2010. These environmental standards, approved by the Canadian Council of Ministers of the Environment, provide for average concentrations of ground-level ozone not exceeding 65 parts per billion, calculated according to an agreed method. The Ozone Annex represents only part of the measures by which Canada strives to meet the Standards.

1.56 Environment Canada and the provinces and territories have over 250 air monitoring stations across Canada that measure air quality through two networks—the National Air Pollution Surveillance Network and the Canadian Air and Precipitation Surveillance Network. The stations, located in urban and rural environments, provide hourly data on NOx and ground-level ozone levels in the air. VOC data are gathered on a 24-hour basis. These data are analyzed and compiled into an annual report. While the Ozone Annex came into force in December 2000, there has been no noticeable change in the amount of ground-level ozone in the air between 1991 and 2002 (Exhibit 1.3).

1.57 The Department indicated that the provincial, territorial, and municipal agencies, which are part of the networks, use various data quality assurance programs. These are supplemented by federal controls that include verifying instrument calibration and performance. Environment Canada provides assurance on the accuracy of the air monitoring data collected and reported, and has stated that it believes the information on ozone concentration to be of adequate quality.

Exhibit 1.3 **Concentration of ground-level ozone for the area in Canada designated by the Ozone Annex**



Source: Environment Canada

Emissions and ozone concentration are known

1.58 The audit determined that Environment Canada knows the estimated emissions of NOx and VOC, as well as the resulting concentration of ground-level ozone in the air. There is a clear target for the desired environmental outcome—reduction in ground-level ozone concentration—as well as estimated emissions reduction targets needed to help achieve that outcome. Furthermore, the Department is measuring results for both ground-level ozone concentration and estimated emissions of NOx and VOC. Given that there are clear and comparable measurements against the desired environmental outcome, in our opinion, this demonstrates reporting against the results and objective of the Ozone Annex.

1.59 However, Environment Canada has not adequately explained the intended purpose of its emissions reduction targets presented in its Report on Plans and Priorities, nor clearly explained how its current estimated emissions and projections differ from these targets.

1.60 **Recommendation.** Environment Canada should clarify its emissions reduction objectives and expected results, and clearly explain why its estimated emissions and projections differ from established targets.

Department's response. Environment Canada accepts the recommendation.

Environment Canada's emission reduction objectives for the Ozone Annex are to implement the measures to reduce emissions of nitrogen oxides (NOx) and volatile organic compounds (VOC) that are outlined for Canada in the international agreement. Decreases in levels of ozone in the ambient air in eastern Canada are expected to result from the implementation of the Canadian measures in combination with the implementation of the emission reduction measures agreed to by the United States in the Ozone Annex.

Because emissions information from industry and other sources of emissions has become more accurate and complete, Canada has been able to revise its estimates of NOx and VOC emissions reductions expected in 2007 and 2010 as measures outlined in the Ozone Annex are implemented. Although the revision of the estimates in 2004 was a requirement in the Ozone Annex. Canada will review and update its estimates for the emissions reductions likely to result from the actions in the Ozone Annex and report these revised projections regularly in the biennial Canada-U.S. reports on progress to implement the Air Quality Agreement.

Prevention of pollution from ships

Ocean pollution

1.61 **The issue.** Canada borders three oceans, has the world's longest coastline, and has an ocean area equivalent to over 30 percent of its landmass. As a result, our economy, history, and social fabric are inextricably linked to the oceans and their resources. Canada's ocean jurisdiction extends to its exclusive economic zone, 200 nautical miles from its coasts.

1.62 Accordingly, maritime shipping is of crucial importance to the country. However, maritime shipping produces various forms of pollution that impact on and damage the environment. Oil discharged from ships is one important type of marine pollution. Assessing the full impact of oil in the marine environment is a complex task. While oiled seabirds are one highly publicized casualty of marine oil pollution, particularly in Atlantic Canada, there are many other, less obvious, detrimental effects on marine animals, plants, and ecosystems.

Did you know?

The federal government estimates that Canada's oceans generate over $20 billion in annual economic activity, and that over $85 billion in ocean trade passes through Canadian waters every year.

1.63 **The agreement.** The International Convention for the Prevention of Pollution from Ships (the MARPOL convention) seeks to eliminate intentional pollution of the marine environment resulting from ship operations and to minimize accidental discharges of pollutants. Through six annexes, the MARPOL convention deals with pollution from oil, chemicals, packaged goods, garbage, sewage, and air emissions. The convention includes requirements for ship construction, certificates and inspection, equipment, record keeping, and in-port procedures. The convention came into force internationally in 1983. Canada became a party to MARPOL in 1993 and has since accepted and implemented the annexes dealing with oil pollution, chemicals, and packaged goods.

Did you know?

Normal ship operations generate different types of operational waste, including garbage, sewage, machinery run-offs, engine room bilges, and oily wastes.

1.64 **The lead department.** Transport Canada is the lead federal department responsible for the MARPOL convention. The Department administers and enforces the convention through the *Canada Shipping Act* and its related regulations. Transport Canada is also responsible for some of the key programs and activities required under MARPOL, such as ship inspections. In December 2003, Transport Canada assumed responsibility for the National Aerial Surveillance Program from Fisheries and Oceans Canada (Canadian Coast Guard). Environment Canada is involved in related enforcement aspects with respect to the protection of migratory birds.

Suspected oily discharge from a ship within Canadian jurisdiction

Source: Transport Canada National Aerial Surveillance Program

Preventing oil pollution

1.65 **What we looked at.** We examined whether Transport Canada knows the extent to which marine oil pollution from ships is being minimized or eliminated in waters within Canadian jurisdiction. Our audit focussed on the Atlantic coast, where marine oil pollution is recognized as a significant problem and federal efforts are concentrated. We reviewed the information available to Transport Canada from key federal government programs and activities related to the prevention or surveillance of marine oil pollution from ships.

Aerial surveillance aircraft

Source: Transport Canada National Aerial Surveillance Program

1.66 **Aerial surveillance.** The National Aerial Surveillance Program established in 1991 serves to detect pollution violations and enforce the convention. The program conducts aerial surveillance in five regions of the country—Newfoundland, the Maritimes, Quebec, Central and Arctic, and Pacific—using three patrol aircraft. It documents the number of patrol hours, vessel over-flights, pollution sightings, sightings per vessel over-flight, and volume of oil discharges observed. The program reports that for Atlantic Canada—the Newfoundland and Maritime regions combined—pollution sightings decreased significantly from 1992–93 to 2002–03.

1.67 However, because the Canadian ocean areas are immense and contain many maritime shipping routes, ensuring adequate pollution surveillance presents a considerable challenge. In Atlantic Canada, the National Aerial Surveillance Program performed 644 hours of surveillance flights in 2002–03 and overflew 1,782 vessels. According to Transport Canada, this represents only about one percent of the known vessel traffic in Atlantic waters within Canadian jurisdiction. Known vessel traffic includes ships destined for, or originating from, Canadian ports. It excludes vessels passing through Canadian waters—ships destined for, and originating from, foreign ports. Transport Canada does not have traffic information on vessels under such passage and thus does not know the total maritime traffic for the purposes of managing the National Aerial Surveillance Program.

1.68 Additionally, federal government reports suggest that a significant portion of intentional oil discharges from ships occurs during periods of darkness or reduced visibility. The National Aerial Surveillance Program is currently unable to perform surveillance in such situations, which markedly hinders its ability to detect those discharges. For all these reasons, the information provided by the program has important limitations and cannot serve to demonstrate the extent of oil pollution from ships.

1.69 As an added consideration, we also found little evidence that Transport Canada has made any significant progress toward its 2001 Sustainable Development Strategy commitment to review the effectiveness of the National Aerial Surveillance Program. For instance, it has not conducted a formal analysis of the risks or patterns of marine oil pollution from ships as a step to better understand the scope of the problem and assess the effectiveness of the program.

1.70 The Integrated Satellite Tracking of Polluters pilot program, started in 2002, is a multi-agency government initiative that evaluates the potential usefulness of radar satellite imagery in helping to detect marine oil discharges off the Atlantic coast. Although the technology is still being tested and developed, it may eventually serve as an aid to the aerial surveillance program.

1.71 **Pollution incident reports.** The Canadian Coast Guard, Transport Canada, and Environment Canada each maintain different pollution incident databases on marine spills, reports on pollution incident investigations, and significant environmental emergencies. However, the information in these databases is limited mainly to reported incidents of various types. Transport Canada was not able to demonstrate how the information is, or could be, used to provide a description of the status of, or trends in, marine oil pollution from ships.

1.72 **Ship inspections.** Transport Canada's Port State Control is a program whereby inspections of foreign vessels are carried out at major Canadian ports to ensure compliance with major international maritime conventions, including the MARPOL convention. Transport Canada reports that the proportion of ship deficiencies related to marine pollution, including inadequate certificates, log books, oil record books, or pollution control equipment, has decreased from 1998 to 2002. In 2002, 525 inspections uncovered deficiencies and 4.4 percent of these deficiencies related to marine pollution (compared with 587 inspections and 6 percent of deficiencies related to marine pollution in 1998). While the inspection results may provide a good indication of compliance with the convention, the Department cannot adequately demonstrate whether the decrease in deficiencies has resulted in fewer ship discharges occurring at sea.

Oiled bird found on a beach in Atlantic Canada

Photo: Pierre Ryan, Canadian Wildlife Service, Environment Canada

1.73 **Oiled bird surveys.** Oil on the sea surface can kill any seabird that it touches and can significantly affect bird populations. This is of particular concern in Atlantic Canada, where ship traffic passes through areas that provide suitable habitat for tens of millions of seabirds of different species. Many dead seabirds wash ashore in southeastern Newfoundland, and Environment Canada has overseen regular beached bird surveys there since 1984.

1.74 Assessing the significance of beached bird surveys is difficult in Atlantic Canada because several factors can influence their results such as location of oil discharges, currents, weather, and seabird migratory patterns. While the surveys provide the best available indication of the number of seabirds killed by oil at sea, they provide only indirect and incomplete information on the extent, frequency, and location of ship oil discharges in the area. Beached bird surveys also lack the frequency and geographical coverage required to provide a reasonable picture of the overall oil pollution problem.

Based on its surveys, Environment Canada estimates that

- oil pollution kills about 300,000 seabirds each year off the coast of Atlantic Canada;
- oil pollution along the coast of southeastern Newfoundland is among the highest in the world, and the problem has persisted from 1984 to 1999 (based on the latest available information); and
- most oil on seabirds is typical of the mixture found in the engine room bilges of ships.

Extent of the problem is not known

1.75 We found that Transport Canada is not able to determine the extent of oil pollution from ships in Atlantic waters within Canadian jurisdiction, either from its own information and activities or in collaboration with other federal departments. Officials of Transport Canada, Environment Canada, and Fisheries and Oceans Canada agreed with our assessment.

1.76 The different information we looked at does not provide an adequate indication of the status of marine oil pollution. As well, while Transport

Canada has made efforts to compile information from the various marine pollution prevention programs, it provided limited evidence that it has analyzed the problem, assessed the effectiveness of existing prevention and surveillance programs, or clearly defined what environmental results could be expected from those programs.

1.77 We recognize that major challenges exist for setting expectations and measuring environmental results with respect to pollution from ships, particularly given the vastness of the ocean areas involved. The Department indicated that, although the U.S. has provided estimates of the effectiveness of MARPOL, they are not aware of any other countries that have been successful in assessing the impacts of MARPOL on the actual quantities of oil being discharged in their waters, intentionally or otherwise. In this context, the government needs to be more transparent and clearly communicate to Canadians what progress it reasonably expects to achieve.

1.78 **Recommendation.** Transport Canada should define the environmental performance and results expectations that ocean oil pollution prevention and surveillance programs can reasonably achieve.

Department's response. Transport Canada accepts the recommendation.

Transport Canada recognizes that it does not have the ability to monitor all ships at all times while in waters under Canadian jurisdiction, and is therefore not capable of calculating the actual total quantities of pollutants being discharged intentionally or otherwise. Instead Transport Canada will use the results of existing inspection investigation and aerial surveillance programs as indicators of environmental performance by the shipping industry. Transport Canada does intend to provide better reporting on the programs that are in place to implement the oil pollution prevention regulations. Reporting for the 2004 season to be completed by the fall of 2005.

United Nations Fish Stocks Agreement

Conserving and managing our fisheries

1.79 **The issue.** Bordered by three oceans and with historical links to fishing, Canada has a large stake in ensuring the conservation and sustainable use of its fisheries. In recent years, Canada's East coast has experienced declines in many fish stocks. Several factors contributed to this decline, including the growth in the size and capacity of fishing fleets and environmental factors such as changes in water temperature.

1.80 Overfishing inside and outside the 200-mile limit has contributed significantly to declines in fish stocks. Canadian conservation measures inside its 200-mile limit have usually been stricter than measures outside the limit. Less stringent measures outside the 200-mile limit undercut coastal countries' conservation measures and inhibit the recovery and rebuilding of fish stocks that straddle or migrate through this boundary.

1.81 **The agreement.** The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, commonly referred to as the United Nations Fish Stocks Agreement or UNFA, provides a framework for international co-operation in the conservation and management of those fish stocks.

200-mile limit or exclusive economic zone—An area extending 200 nautical miles (or 370 kilometres) seaward from the coast and in which a country has sovereign rights for the purposes of exploring and exploiting marine resources.

Fish stock—A grouping of fish usually based on genetic relationship, geographic distribution, and movement patterns.

Straddling fish stocks—Fish stocks that are located both within and outside the 200-mile limit.

Highly migratory fish stocks—Fish that carry out extensive migrations that can occur within and outside the 200-mile limit.

1.82 Countries that ratified UNFA committed to implement a precautionary approach to managing straddling and highly migratory fish stocks. A precautionary approach involves exercising caution, given that fisheries are difficult to control, not completely understood, and subject to change. A precautionary approach also includes clearly identifying conservation objectives and targets. Under the Agreement, countries are responsible for meeting the Agreement's conservation objective both within and outside their respective 200-mile limits. The Agreement came into force in December 2001. Canada, the United States, and more recently the European Union are among the 52 parties to UNFA.

1.83 According to UNFA, countries should pursue co-operation through the appropriate international fisheries management organizations to ensure effective conservation and management of straddling and highly migratory fish stocks. The organizations principally responsible for such fish stocks in the northwest Atlantic are the Northwest Atlantic Fisheries Organization (NAFO) and the International Commission for the Conservation of Atlantic Tunas (ICCAT).

1.84 NAFO manages 14 straddling fish stocks in the area outside Canada's 200-mile limit. ICCAT collects data or establishes management measures for about 30 species of highly migratory fish in the Atlantic Ocean and its adjacent seas. Both organizations co-ordinate scientific research and provide fish stock assessments and management advice on behalf of member countries. They also establish allowable fish catches and quotas, minimum fish sizes, and other conservation management measures.

1.85 **The lead department.** Fisheries and Oceans Canada is the lead federal department responsible for UNFA. The Agreement is implemented in Canada primarily through the *Coastal Fisheries Protection Act* and its regulations, the legislative means for controlling fishing vessel access to, and activities in, Canadian waters. Key federal programs and activities that support the agreement include fisheries science, integrated fisheries management plans, offshore surveillance programs, enforcement programs, and international negotiations to assert Canadian interests in internationally managed fish stocks.

Information on fish stocks

1.86 **What we looked at.** We examined whether Fisheries and Oceans Canada knows the extent to which the long-term conservation and sustainable use of the selected straddling fish stocks and highly migratory fish stocks is being achieved.

1.87 To examine what information the Department has, we selected four fish stocks to look at in more detail. We looked at three straddling stocks—3NO cod, 3KLMNO Greenland halibut (also known as turbot), and 3L northern shrimp—and one highly migratory stock, bluefin tuna west of 45 degrees longitude. The code before the stock names identifies the specific stock and refers to its geographic location in the northwest Atlantic Ocean (henceforth we refer to the stocks by species name only).

1.88 **State of the stocks.** Fisheries and Oceans Canada has data on the state of the three straddling stocks that we looked at, including **biomass, spawning stock biomass** and **abundance**. These data are based on peer-reviewed stock assessments carried out by the NAFO Scientific Council, comprised of stock assessment scientists from the member countries, using data from member countries.

Abundance—The number of fish that make up a stock.

Biomass—Abundance of a stock in units of weight.

Spawning stock biomass—The weight of fish in a stock that are old enough to reproduce.

Recruitment—The number of fish added to the exploitable stock each year through growth or migration.

By-catch—The catch of species other than the intended species being fished.

1.89 The Department also has information on the state of the bluefin tuna, including abundance, spawning stock biomass, and **recruitment**. Scientists rely primarily on data collected from the commercial fishery. ICCAT's Standing Committee on Research and Statistics conducts stock assessments in a manner similar to the NAFO process.

1.90 Fisheries and Oceans Canada has stated that it believes the information presented in the following graphs (Exhibit 1.4) to be of adequate quality and free of important errors, and that it has been peer reviewed by either NAFO Scientific Council or the ICCAT Standing Committee on Research and Statistics.

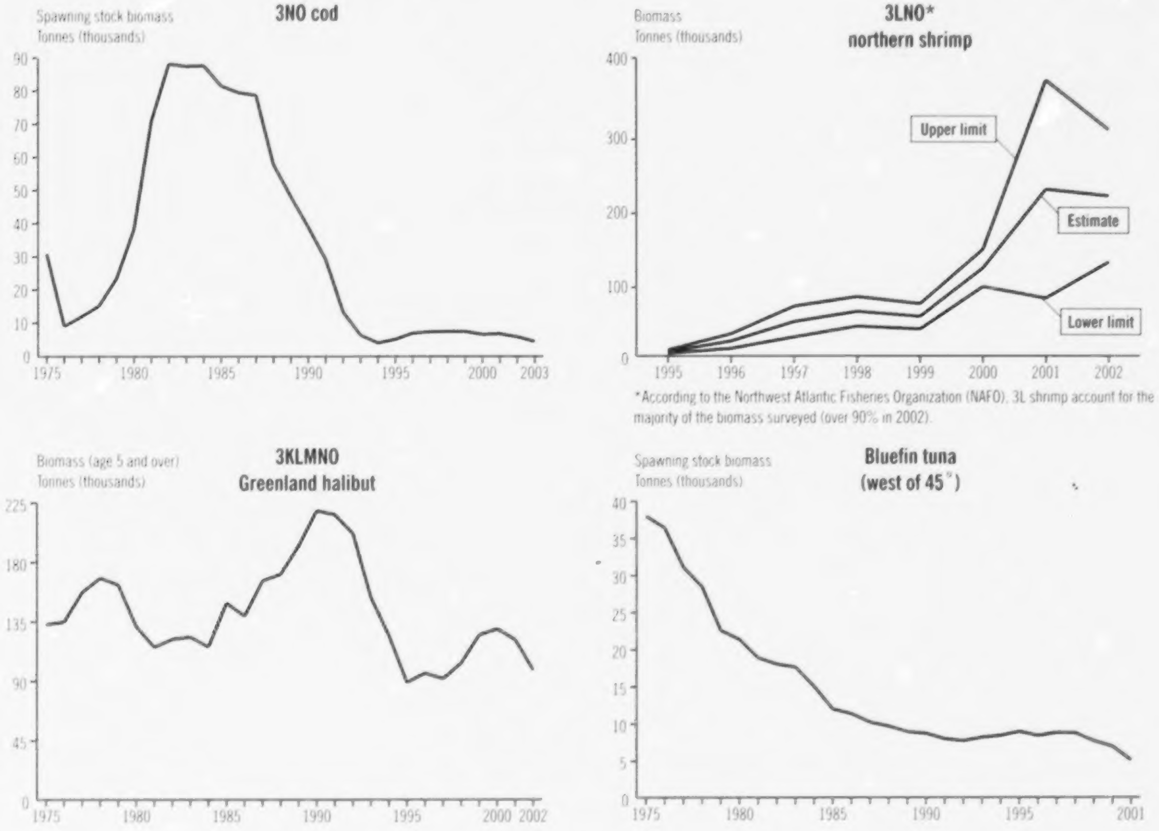
1.91 However, the oceans' ecosystems and the environmental and human impacts on fish stocks are highly complex and only partially understood. As a result, fisheries science is challenging and most often reflects considerable uncertainties, particularly in assessing fish stocks and expected conservation outcomes.

1.92 **Conservation targets.** The process of setting conservation targets for straddling and highly migratory fish stocks involves considerable bilateral and multilateral negotiation with other NAFO and ICCAT members. Not all members have ratified UNFA and are formally committed to all its principles, such as setting conservation targets. Fisheries and Oceans Canada indicated that it intends to pursue the adoption of the precautionary approach and clear conservation objectives and targets by NAFO and ICCAT.

1.93 Domestically, in its sustainable development strategy and reports on plans and priorities, the Department also affirmed its commitment to develop clear and measurable fisheries management objectives. The Department uses integrated fisheries management plans as the primary tool to manage fisheries in Canada, and these are intended to include specific and measurable objectives for fish stocks.

1.94 We examined documentation including integrated fisheries management plans, NAFO and ICCAT stock assessments, guidance on conservation and enforcement measures, and annual reports to determine what conservation objectives and measurable targets were established for the four selected stocks. We found that conservation objectives and measures differ depending on the state of the stocks.

Exhibit 1.4 State of fish stocks selected for this audit



*According to the Northwest Atlantic Fisheries Organization (NAFO), 3L shrimp account for the majority of the biomass surveyed (over 90% in 2002).

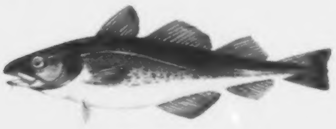
Source: NAFO (for cod, shrimp, and halibut) and ICCAT (for bluefin tuna)

1.95 **3NO cod.** Due to historically low numbers of cod, there has been a fishing moratorium on the stock since 1994. The objective is to keep cod **by-catch** at the lowest possible levels. The NAFO Scientific Council has estimated a precautionary limit of 60,000 tonnes, as the level of biomass at which no fisheries should take place. However, neither the NAFO Fisheries Commission nor the Department has accepted this estimate as a formal conservation target.

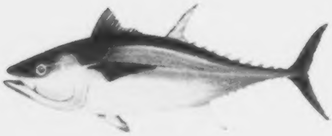
1.96 **3KLMNO Greenland halibut.** This stock has been declining in recent years. As a result, NAFO implemented a 15-year rebuilding program. In 2003, NAFO established a rebuilding target of 140,000 tonnes average exploitable biomass. Although this target has been accepted, the last integrated fisheries management plan was developed in 2000 and does not reflect this more recent target.

1.97 **3L northern shrimp.** The biomass of the northern shrimp stock has been increasing in recent years. Fisheries and Oceans Canada manages the portion of the stock that is within the 200-mile limit through an integrated fisheries management plan. However, the plan does not specify any conservation or management targets. The Department stated that scientific data are insufficient to set proper management targets, because the northern shrimp fishery is relatively new. For instance, scientists cannot confirm if the current high biomass level will continue or why it has increased.

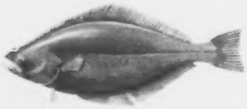
Fish species we looked at in our audit



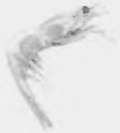
Atlantic cod



Bluefin tuna



Greenland halibut



Northern shrimp

Source: Fisheries and Oceans Canada

1.98 **Bluefin tuna.** Past assessments indicate that the spawning stock biomass declined between 1970 and 1990, but has remained stable since. In 1998, ICCAT adopted a 20-year program aimed at rebuilding the stock. The Department indicated that a component of the program includes rebuilding the spawning stock biomass to 1975 levels by 2018. Currently, the best estimate of the 1975 spawning stock biomass is approximately 38,000 tonnes.

Conservation targets not always set

1.99 We found that Fisheries and Oceans Canada knows the state of the straddling and highly migratory fish stocks examined through information such as abundance, biomass, and spawning stock biomass. However, based on our selected fish stocks, we also found that measurable conservation objectives or targets have been set and accepted only for the Greenland halibut and bluefin tuna. Accordingly, the Department or the international management organizations have not always set the level at which stocks should be conserved or maintained. In such instances, the actual state or level of these stocks cannot be reviewed in relation to their desired or expected state, and it is not possible to determine to what extent the UNFA conservation objective is being achieved.

1.100 However, Fisheries and Oceans Canada indicated that establishing conservation targets is a complex process based on international negotiations, and UNFA only came into force in 2001. In addition, the Department has stated that its management priority has been to halt and reverse the significant and worsening trend of overfishing of straddling fish stocks in waters outside Canada's jurisdiction in recent years, and in this respect, it has been premature to set management targets, objectives and reference points for re-opening fisheries for stocks currently under moratoria.

1.101 Nonetheless, because the Department committed to implement a precautionary approach to fisheries management, we expected to find measurable conservation targets for all four fish stocks we looked at. We found the Department's overriding priority to halt overfishing was not clearly articulated in accountability documents such as its reports on plans and priorities. Fisheries and Oceans Canada needs to be more transparent and to better communicate to Canadians its conservation priorities and expectations.

1.102 **Recommendation.** Fisheries and Oceans Canada should clearly articulate its position in terms of the priorities, process, and timeframes to set sustainable conservation targets for straddling and highly migratory fish stocks.

Department's response. Fisheries and Oceans Canada accepts the recommendation.

The Department of Fisheries and Oceans has implemented a comprehensive conservation and management regime aimed at conserving and making sustainable use of Canada's fisheries resources and their habitats for the benefit of present and future generations. Canadian fisheries legislation and management policies conform with the general principles of the United Nations Fish Stocks Agreement.

Actions being taken:

- The Department will more clearly reflect its position, in terms of the priorities, process and timelines, to set sustainable conservation targets for straddling and highly migratory fish stocks in its domestic reports including the Report on Plans and Priorities, the Fisheries Management Business Plan, and revisions to the relevant integrated fisheries management plans to reflect performance measures, the monitoring of performance and adaptive actions to stay on course. The Department's performance report will report on progress towards the expected results. Its position also will be reflected, as appropriate, in its intradepartmental and public Web sites.
- The Department is continuing consultations with Canadian industry advisors on a precautionary approach framework for application to domestic fisheries, including the straddling fish stocks, for discussion at the annual meeting of the Northwest Atlantic Fisheries Organization, September 2004. A pilot application of the precautionary approach framework to selected straddling stocks in 2005 will be proposed. Consultations on the highly migratory fish stocks are expected in 2004–2005.

The revisions to domestic reports will be made in the normal time periods for their updates in the fall of 2004 and during 2005. The Department's Web sites will be updated as a result of revisions to the domestic reports. Pilot application of the precautionary approach to selected straddling stocks will be proposed in 2005.

Wetlands of international importance

Conserving wetlands

1.103 **The issue.** Wetlands are one of the key life support systems on Earth, and they cover about four percent of the planet. They provide critical habitat for many species of fauna and flora, play an important role in filtering and providing water, and are among the most productive ecosystems in the world. With almost 150 million hectares of wetlands, Canada is estimated to have about one-quarter of the world's total.

Wetlands—Areas of land covered with water for a part of the day or year. In Canada, the term wetland refers to marshes, swamps, sloughs, bogs, fens, or shallow waters. Wetlands may also include the freshwater edges of lakes and rivers, the marine waters of estuaries, and the tidal ocean shore zone.

1.104 The survival of wetlands depends on their preservation and the conservation of their ecological functions. In Canada, wetlands have historically been threatened by drainage, land reclamation, pollution, and competing land uses. During the last two centuries, Canadian wetlands have suffered continued loss and degradation.

1.105 The agreement. The Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar convention) was adopted in Ramsar, Iran in 1971. The convention came into force internationally in 1975, and Canada became a party to it in 1981. The convention's member countries total 138 as of May 2004 and represent all geographic regions of the planet.

1.106 The objectives of the Ramsar convention are to stem the progressive encroachment on and loss of wetlands and to ensure their conservation and sustainable use. Member countries have agreed to designate at least one site for inclusion in the List of Wetlands of International Importance (the Ramsar list) and to conserve and maintain the ecological character of designated wetland sites. As of May 2004, there were 1,367 designated Ramsar wetland sites worldwide.

1.107 The lead department. Environment Canada, through the Canadian Wildlife Service, is the lead federal department responsible for the convention. The first Ramsar site designated in North America was at Cap Tourmente, Quebec, in 1981. As of May 2004, Canada had designated 36 Ramsar sites across the country (Exhibit 1.5), comprising over 13 million hectares—an area roughly twice the size of New Brunswick.

1.108 Federal departments and agencies, including Environment Canada, Indian and Northern Affairs Canada, Parks Canada, and the National Capital Commission, manage about 77 percent of the Canadian wetland areas designated as Ramsar sites. The provinces manage another 22 percent, and non-government groups manage the remaining 1 percent.

Did you know?

Canada has the most surface area designated as Ramsar wetland sites:

- Canada—13,051,501 hectares
- Russian Federation—10,323,767 hectares
- Australia—7,371,873 hectares
- Botswana—6,864,000 hectares
- Peru—6,777,414 hectares
- Bolivia—6,518,073 hectares
- Brazil—6,434,086 hectares

Source: The Ramsar Convention Secretariat

Incomplete information on wetland sites

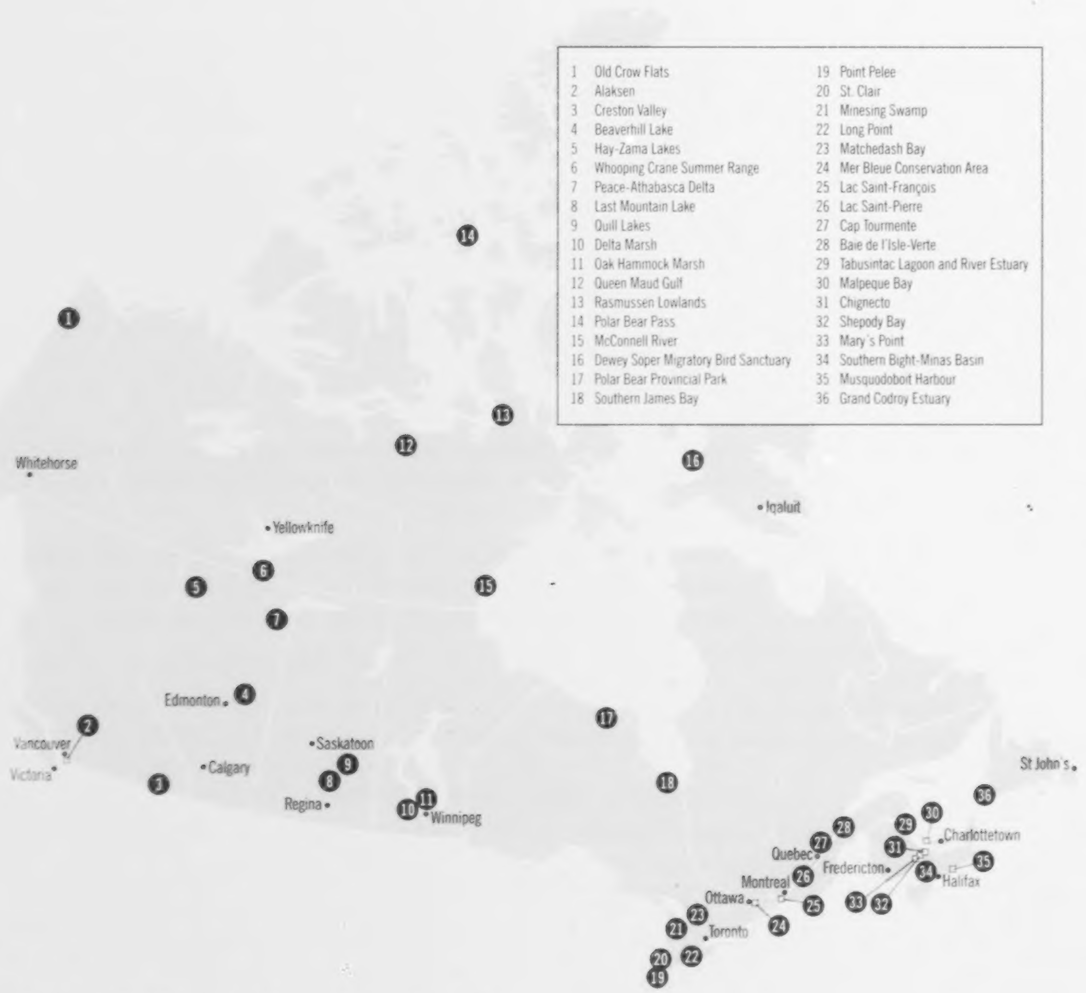
1.109 What we looked at. We examined whether Environment Canada knows to what extent Canada's designated Ramsar wetland sites are being conserved.

1.110 Objectives and expectations. During our audit, Environment Canada could not identify specific conservation objectives and expected results for most of Canada's 36 Ramsar sites and, hence, define what conservation actually means for these sites.

1.111 To help ensure the long-term conservation of Ramsar sites, member countries called for the development of management plans for each designated wetland. They adopted management planning guidelines that indicate that achieving outcomes is the purpose of management planning, that objectives and performance indicators must be measurable, and that established performance indicators must be monitored.

1.112 Environment Canada provided evidence that management plans have been developed for only 14 of Canada's 36 Ramsar sites, and plans for half of these 14 sites date back to the early- to mid-1980s. Department officials indicated that the plans were deemed appropriate at the time they were developed. Nonetheless, the majority of the management plans provided

Exhibit 1.5 **Ramsar wetland sites in Canada**



1	Old Crow Flats	19	Point Pelee
2	Alaksen	20	St. Clair
3	Creston Valley	21	Minesing Swamp
4	Beaverhill Lake	22	Long Point
5	Hay-Zama Lakes	23	Matchedash Bay
6	Whooping Crane Summer Range	24	Mer Bleue Conservation Area
7	Peace-Athabasca Delta	25	Lac Saint-François
8	Last Mountain Lake	26	Lac Saint-Pierre
9	Quill Lakes	27	Cap Tourmente
10	Delta Marsh	28	Baie de l'Isle-Verte
11	Oak Hammock Marsh	29	Tabusintac Lagoon and River Estuary
12	Queen Maud Gulf	30	Malpeque Bay
13	Rasmussen Lowlands	31	Chignecto
14	Polar Bear Pass	32	Shepody Bay
15	McConnell River	33	Mary's Point
16	Dewey Soper Migratory Bird Sanctuary	34	Southern Bight-Minas Basin
17	Polar Bear Provincial Park	35	Musquodoboit Harbour
18	Southern James Bay	36	Grand Codroy Estuary

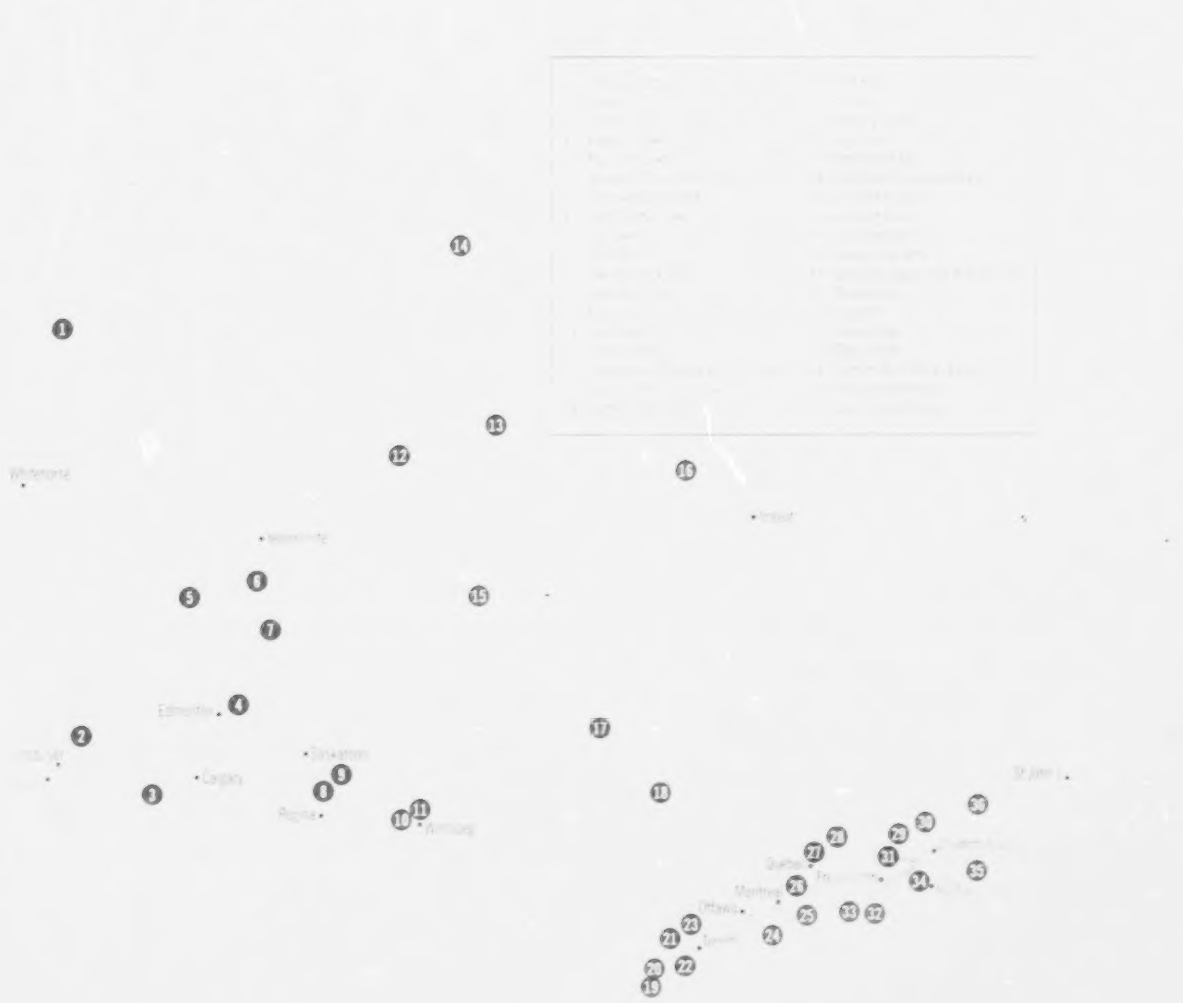
Source: Adapted from Wetlands International map of Ramsar sites in Canada.

include only generic conservation objectives, and very few identify measurable performance or results expectations.

1.113 **Results information.** We noted that Environment Canada does not know the conservation progress or results of Ramsar sites, mainly because it does not collect or compile such information on individual sites. While centrally the Department has some descriptive information on each site, this information does not include conservation results achieved.

1.114 We also found that site managers are not required to provide periodic information on the status or results of their sites, and Environment Canada has not otherwise compiled such information. Consequently, the Department does not know how well these wetlands are being conserved, what gaps

Ramsar wetland sites in Canada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Québec
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St. John's

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1.114 We also found that site managers are not required to provide periodic information on the status or results of their sites, and Environment Canada has not otherwise compiled such information. Consequently, the Department does not know how well these wetlands are being conserved, what gaps remain, and what lessons it can learn. There is no clear picture of Canada's overall progress in achieving the Ramsar conservation objective for its 36 designated sites.

1.115 **Site-specific information.** To get a better indication of the information on results that individual sites have, we looked in detail at four sites: Cap Tourmente, Quebec; Last Mountain Lake, Saskatchewan; Polar Bear Pass, Nunavut; and St. Clair, Ontario. Environment Canada manages these four sites.

Canadian Ramsar wetland site–Last Mountain Lake, Saskatchewan

Source: Canadian Wildlife Service, Environment Canada

1.116 Two of the four sites could not provide documentation on conservation results achieved. The two other sites provided results information on the dynamics of key animal and vegetation populations and on the status of wetland habitats. One of these two sites had recently compiled its results information to identify gaps and guide the future update of its management plan.

Conservation results are not known

1.117 We determined that Environment Canada does not have adequate information on the extent to which most Canadian Ramsar sites are being conserved.

1.118 **Recommendation. Environment Canada should ensure that expected conservation results are specified for each Ramsar site and that conservation results and performance are periodically monitored and reported.**

Department's response. Environment Canada accepts the recommendation.

Within its resource capacity, Environment Canada will update all the management plans for Ramsar sites designated on its lands in accordance with the Ramsar convention's management planning guidelines. The Department will encourage the managers of Ramsar sites that are not on land owned by the Department to prepare management plans following the Ramsar convention's management planning guidelines. These are to be completed no later than Ramsar's 10th Convention of the Parties (2008).

Within its resource capacity, Environment Canada will evaluate and report the conservation results and performance for all Canadian Ramsar sites on its lands, every three years as part of Canada's National Report to the Ramsar Convention of the Parties. Environment Canada will encourage managers of Ramsar sites that are not on land owned by the Department to evaluate and report the conservation results and performance of those sites every three years as part of Canada's National Report to the Ramsar Convention of the Parties.

Accountability observations

1.119 Our five case studies provided additional insights on the lead departments' accountability for the results of their agreements. We observed that, overall, there are no notable differences between how the federal government manages and accounts for the environmental policies and objectives defined in international environmental agreements and those defined elsewhere. There are no management policies, procedures, or other mechanisms that apply exclusively to international environmental agreements. Related results are basically accounted for in a manner similar to those of other government policies, programs, or initiatives. In our view, this is neither unexpected nor a problem, provided accountability principles are applied. However, we observed that key elements of accountability are not always present.

Responsibilities of lead departments

1.120 The three departments responsible for implementing the five agreements we examined—Environment Canada, Transport Canada, and Fisheries and Oceans Canada—unanimously asserted that their lead responsibilities are well defined and delegated. These include responsibilities for defining performance expectations, monitoring and reporting, and reviewing performance and taking necessary actions to ensure that the environmental results and outcomes of the agreements are achieved.

1.121 Although they may be clear to the lead departments themselves, we could not determine precisely how and where these responsibilities are delegated and defined. We confirmed that there are no overarching government requirements or commonly used mechanisms to ensure that the specific role and responsibilities of lead departments are formally defined and communicated.

1.122 This may be less a concern where the objective of an agreement is clearly aligned with the mandate and responsibilities of the department, as there is less potential for uncertainty about its role as lead department. However, where the objective and obligations of an agreement involve more than one federal department or agency, or necessitate co-ordination with other jurisdictions (for example, provinces and territories), the potential consequences of unclear roles and responsibilities are much greater.

Performance expectations

1.123 Of the five agreements we looked at, environmental performance expectations (or targets) were clearly identified in the case of the Montreal Protocol, the Ozone Annex, and partially in the case of UNFA depending on the fish stock examined.

1.124 In the case of the Montreal Protocol and the Ozone Annex, we also observed that Environment Canada has defined the essential elements of a results or accountability framework. As well, the Department has identified key elements of a data collection strategy to help determine how it defines, collects, and analyzes performance information. We found the use of such tools was not evident for the other three cases studies.

Reporting to Parliament and Canadians

1.125 We found that environmental results are measured and readily available only for the Montreal Protocol, the Ozone Annex, and UNFA. For instance, results under the Montreal Protocol are reported through the United Nations Environmental Programme reports and Canada's National Environmental Indicator Series. For the Ozone Annex, air quality results are identified in the joint Canada-U.S. biennial reports as well as in Environment Canada's departmental performance reports. For UNFA, information on the state of various straddling and migratory fish stocks can be obtained from NAFO and ICCAT.

1.126 Despite no specific requirements to report to Parliament or Canadians on the achievement of the environmental outcomes of the five agreements, in some instances the lead departments did use their departmental performance reports to report on international environmental agreements. In most cases, however, the reporting centred on the activities or initiatives of the departments rather than on the environmental results or outcomes achieved. We noted one exception: for the Ozone Annex, Environment Canada provided information in its performance reports on levels of ground-level ozone in major cities and concentrations of related air pollutants.

Review and oversight

1.127 In all cases except the MARPOL convention, the lead departments reported that they conducted periodic performance reviews to assess environmental results achieved against expected results. However, none of the departments had clear documentation on the conclusions of such reviews.

1.128 We also asked the lead departments to identify any significant operational constraints that affect the achievement of the agreements' performance expectations or objectives. As well, we asked them to identify any corrective measures required to ensure that the environmental expectations or objectives of their agreements will be met. For three agreements, the lead departments identified the following constraints:

- **UNFA.** Fisheries and Oceans Canada identified overfishing and wilful non-compliance with international fisheries rules by some states.
- **MARPOL**. Transport Canada identified a lack of responsibility for assessing the state of Canadian ocean waters and difficulties in assessing the agreement's impact on the state of ocean waters.
- **Ramsar**. Environment Canada identified resources as a key constraint.

Only Fisheries and Oceans Canada identified potential corrective measures. These included initiatives underway to obtain additional resources and to increase co-operation with the Department of National Defence.

1.129 Overall, we observed that the lead departments could not properly demonstrate how they carry out their management oversight and review responsibilities. This is of particular significance where the departments are not achieving, or do not clearly know, their environmental results or performance. In such instances, it was not readily apparent how they planned to ensure that the objectives and desired results of the agreements would be achieved.

1.130 **Recommendation.** When assigned responsibility for international environmental agreements, the lead federal departments or agencies should clearly specify and document the environmental results they expect to achieve; how they will measure and report results achieved; and how they will oversee and review results to improve performance.

Government's response. The Government accepts the recommendation (response co-ordinated by Environment Canada on behalf of the Government of Canada).

The Government of Canada will continue to work to improve reporting provisions under international environmental agreements. The lead federal department or agency with responsibility for each key international environmental agreement will report on results and expected results; and if not contained in these reports, will provide additional specifications on how results are measured and reported; what results are achieved; and how it will oversee and review results to improve performance.

Conclusion

1.131 In our view, for the federal government to demonstrate to Canadians the environmental results achieved in relation to Canada's international environmental agreements, two elements of accountability are indispensable—setting performance expectations, and measuring and reporting results. Departments that are accountable for results clearly specify the results they expect, and then measure and report the results achieved.

1.132 In our audit case studies we noted that the lead departments have varying degrees of information and knowledge about whether they are achieving the environmental objectives and results of their agreements. We found that the departments know the environmental results for two agreements (the Montreal Protocol and the Ozone Annex), do not know results for two others (MARPOL and Ramsar) and have partial knowledge for one agreement (UNFA). We observed that for the Montreal Protocol and the Ozone Annex, the expected environmental results were clearly defined and results were measured.

1.133 We recognize that setting quantifiable results expectations and then measuring results against those expectations can be a daunting challenge when dealing with complex environmental issues. As well, the context and difficulties surrounding each agreement we examined differ, and for this reason, care should be taken not to generalize these findings to all Canada's international environmental agreements. Nonetheless, the audit findings illustrate that

- where results expectations are better defined, departments are better positioned to know the extent to which agreement objectives and desired results are being achieved;
- where there are significant constraints or challenges to achieving the desired environmental results, better transparency is required in defining and communicating what results can reasonably be achieved; and
- while setting performance expectations and measuring results for complex environmental issues can be difficult, it is nonetheless possible.

About the Audit

Objective

The objective of the audit was to determine whether the federal lead departments know to what extent specific key objectives of selected international environmental agreements are being achieved.

Scope and approach

We selected the following five international environmental agreements as audit case studies:

- The Montreal Protocol on Substances that Deplete the Ozone Layer (Environment Canada)
- The Ozone Annex to the Canada–U.S. Agreement on Air Quality, (Environment Canada)
- The International Convention for the Prevention of Marine Pollution from Ships—MARPOL (Transport Canada)
- The United Nations Fish Stocks Agreement—UNFA (Fisheries and Oceans Canada)
- The Convention on Wetlands of International Importance Especially as Waterfowl Habitat—Ramsar (Environment Canada)

Our audit examination work was conducted mainly from January to May 2004, and focussed primarily on the three lead federal departments responsible for the five agreements: Environment Canada, Transport Canada, and Fisheries and Oceans Canada. We reviewed the performance and results information lead departments had available on specific key environmental objectives of the selected agreements. We also asked departments to indicate and describe how they applied elements of accountability in the context of their agreements and to provide supporting evidence and documentation. In carrying out our audit, we interviewed department officials and other selected stakeholders and reviewed departmental files, reports, and other documentation.

In addition, we interviewed officials at the Privy Council Office, the Treasury Board Secretariat, and Foreign Affairs Canada to identify and better understand the key government processes and mechanisms available to help ensure accountability for results once the agreements are in force.

The audit assessed whether the lead departments had the necessary information to know what environmental results the government had achieved for the specific objectives it committed to. We did not audit the government's compliance with the agreements, the effectiveness of the programs or the means used to achieve its objectives, the pace or progress in addressing environmental issues, or the accuracy or quality of the information used by the departments.

The quantitative information we presented in this chapter is based on data drawn from various federal and other sources indicated in the text. We are satisfied with the reasonableness of the data, given their use in this chapter. However, the data have not been audited.

Criteria

As a means of assessing whether the federal lead departments know to what extent specific key objectives of the selected agreements are being achieved, we expected lead departments to

- have information on actual outcomes achieved in order to determine to what extent specific key objectives of the international environmental agreements are being fulfilled.
- demonstrate how adequate assurance is provided on the quality of the information used to determine whether specific key agreement objectives are being achieved.
- demonstrate how the government's activities (outputs) contribute to achieving the specific key objectives (outcomes) of the selected agreements.

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Report of the
Commissioner of the Environment and Sustainable Development
to the House of Commons—2004

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to the House of Commons

Chapter 2

Canadian International Development Agency—Development Assistance and the Environment

Office of the Auditor General of Canada

2004

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Development Assistance and the Environment

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The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters, and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

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Chapter

2

Canadian International Development Agency

Development Assistance and the Environment

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

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Canadian International Development Agency

Development Assistance and the Environment

Main Points

2.1 Access to safe and adequate water is one of the most pressing needs faced by people in developing countries. The Canadian International Development Agency (CIDA) has a number of projects and activities related to meeting this need. The projects we reviewed are changing the lives of beneficiaries for the better and are responding to identified community needs. Throughout our fieldwork, many people told us that CIDA was responsive to countries' needs. We found that CIDA programming documents reflect the expressed environment and sustainable development needs and priorities of the countries we visited.

2.2 CIDA is experimenting with different ways to ensure the long-term sustainability of its projects. It is seen to use a participatory approach to designing and implementing projects that emphasize local ownership and capacity development. The Agency now needs to monitor the long-term success of these experiments.

2.3 CIDA's overall approach to water issues lacks coherence. The Agency has not set out specific expectations and guidance for what it wants to accomplish, particularly in relation to water-related commitments contained in international agreements. There is little evidence that these commitments have had an explicit influence on country programming. Field personnel are unclear about which of the many, varied CIDA policy commitments they are expected to reflect in country programs and in projects. CIDA needs to update and rationalize its priorities and expectations and direct its efforts toward producing tangible results.

2.4 CIDA has made efforts to integrate environmental sustainability into its decision making, but it has not taken sufficient action to achieve its policy objectives. The processes and documentation we reviewed did not provide assurance that the projects we reviewed were designed in an environmentally responsible way. We observed examples of CIDA personnel doing a good job of incorporating environmental considerations into their projects. However, the Agency needs to develop tools and guidance to examine the environmental sustainability of all its projects and country programs.

2.5 CIDA lacks the performance measurement and reporting framework to reliably measure its overall progress on commitments related to water and environmental sustainability. The projects we reviewed identify indicators to measure immediate and long-term results and benefits, but there is no provision for actually doing the long-term measuring. Thus, the Agency cannot be sure of the sustainability of project results.

Background and other observations

2.6 As Canada's aid agency, the Canadian International Development Agency gave almost $2 billion in official development assistance to developing countries and multilateral organizations in 2002. These funds were targeted in a broad range of sectors, such as education, health, transport, energy, agriculture, and forestry. Sustainable development is at the core of CIDA's mandate.

2.7 CIDA operates in an international context, contributing to and working in collaboration with many other aid agencies, non-governmental organizations, international financial institutions, and UN agencies. The audit focussed on its country-based programming. The Agency has made and endorsed many commitments in support of environment and sustainable development through various conventions, protocols, declarations, and summits. These have established broad environmental goals and, in many cases, imposed obligations on developed countries such as Canada to assist developing countries.

2.8 Water concerns are prominent in several agreements, including Agenda 21 from the 1992 United Nations Conference on the Environment and Development, the Convention to Combat Desertification, and the Millennium Development Goals. These called for concerted action in the areas of drinking water supply, sanitation, water conservation, and integrated water resource management. Water issues have been a long-standing area of programming within CIDA.

2.9 The environment is a crucial part of development assistance. Within CIDA, the environment is both a sector of programming (for example, addressing biodiversity and pollution) and a formal cross-cutting theme. In its 1992 Policy for Environmental Sustainability, CIDA committed to integrating environmental considerations in all of its decision making and activities. Aid projects of all types have the potential to cause unintended harm and must therefore be properly planned and delivered. Moreover, aid projects and country programs present opportunities to advance other project goals through close attention to interactions between the environment, local economies, and societies.

The Agency has responded. The Agency has agreed with our recommendations. The Agency's responses, including the actions it is taking or intends to take to address the recommendations, are set out in the chapter.

Introduction

Fajima at school. Zogu, Northern Region, Ghana.

Source: Christian Children's Fund of Canada (Ghana Office)

2.10 Providing assistance to developing countries has long been a cornerstone of Canada's foreign policy in order to reduce poverty and contribute to a more secure, equitable, and prosperous world. Three of the Canadian International Development Agency (CIDA) projects we visited demonstrate how the Agency has helped people around the world to fight poverty and achieve a better life.

2.11 **Providing water to a village in Ghana.** Five years ago, Fajima would rise early and, in great pain, hobble the three kilometres each way to and from the nearest source of water with a water bucket on her head. Fajima was a victim of guinea worm, a debilitating water-borne parasite. There was no time for school, even if she had been well enough to attend. Now a hand-dug well, built by CIDA, is just steps from Fajima's home and provides clean water to her family and the whole village of Zogu in the Northern Region of Ghana. The chief of the village told us that the incidence of guinea worm has dropped to almost zero since the well was dug. Most children, including Fajima and her girlfriends, now go to school daily.

Agro-forestry—cocoa growing among trees. CADETH Agro-forestry Centre, Atlantida, Honduras.

2.12 **Protecting the watershed in Honduras.** Saul was a farmer who migrated from the unproductive low lands of Honduras' north coast to the forested mountains. He had to slash and burn the tropical rainforest in order to clear the land he needed for the crops to feed his family. This led to degradation of the upper watershed. CIDA's Broadleaf Agro-forestry project changed that by teaching Saul how to optimize and diversify his crops while protecting the surrounding forest and watershed. Saul now takes pride in his fruit farm and enjoys the stability of a real home, while water continues to flow for him and others downstream in the watershed.

2.13 **Provision of water, sanitation, and hygiene education in Indonesia.** For many years, rural villagers on the Island of Sulawesi have relied on donkey carts and walking to collect water. Sama, a young woman living in the remote village of Batu, had no running water until CIDA's Sulawesi Rural Community Development project built a gravity-fed water supply system for her village. Sama volunteered to receive training in health and sanitation so that she could teach other villagers the importance of washing, using soap, and disposing of garbage properly. Villagers indicated to us that as a result of the new water system and hygiene education, there is far less diarrhea and skin disease in the village.

Sama and a project poster that teaches proper hygiene. Sulawesi, Indonesia.

Making development assistance sustainable and environmentally responsible

2.14 Development assistance is a complex and challenging business, and many external factors affect CIDA programming (see Challenges in development assistance, page 4). Canada and other countries have firmly established the concept of sustainable development as a key guiding principle of international aid and assistance. Donors, financial institutions, and recipients of aid recognize that economic growth, social prosperity, and environmental conservation go hand in hand.

Challenges in development assistance

Focus has shifted. Canada and numerous other countries have been providing development assistance for over 50 years. During this time, donors have learned from their experience and changed how they deliver aid. The emphasis has shifted from projects that create significant physical impact to projects geared more toward capacity development and institutional governance.

CIDA is not alone. A wide variety of organizations provide development assistance. These include aid agencies from donor countries, financial institutions such as the World Bank and regional development banks, UN agencies such as the United Nations Development Programme, non-governmental organizations, and universities. Each organization has its own area of specialization and its own approach and rules. CIDA supports and co-operates with many of these organizations.

Recipient countries are sovereign. Donors are there by invitation. Country programming and project implementation must be respectful of a country's political system; the formal and informal rules that govern decision-making; and, most important, the country's needs and priorities. CIDA may have difficulty complying with provisions of the *Canadian Environmental Assessment Act* due to restrictions on conducting public consultation and obtaining information in recipient countries.

A lack of capacity. In many developing countries, institutional infrastructure does not exist in governments, non-governmental organizations, and the private sector, as it does in developed countries. Ministries are not well staffed, laws and regulations are not enforced, and technical knowledge may be lacking.

Development assistance is a long-term process. Projects generally take one or two years to plan and many more years to realize their expected benefits and achieve their full impact. The challenge is to understand why and when aid works—and then to make it work consistently.

Water from a treated system (left) and community drinking water (right), Digma, Northern Region, Ghana.

2.15 A significant factor that limits progress is environmental deterioration. Most developing countries are still overwhelmingly rural. Their economies are highly dependent on natural resources, which are increasingly under threat from desertification, deforestation, air and water pollution, climate change, and population pressures. Development that degrades natural ecosystems and resources will ultimately undermine the long-term economic or social development measures taken to sustain poverty reduction. Aid projects need to be planned and delivered in a manner that avoids environmental harm now and for future generations.

2.16 **Water is vital to life and a pressing problem in developing countries.** Water is an economic resource, a mode of transportation, a necessity for agriculture, and an integral part of natural ecosystems. Clean or potable water is a basic human need, and CIDA recognizes that many developing countries have already been facing shortages of water for a long time.

Did you know?

- Number of deaths every year from water-related diseases: **5 million**
- Percentage of illnesses and deaths in the developing world from water-related diseases: **80**
- Percentage of the world's hospital beds occupied by people suffering from water-borne diseases: **50**
- Percentage of the world's irrigated land degraded by salinization due to poor management of water for agricultural irrigation: **20**

CIDA and development assistance

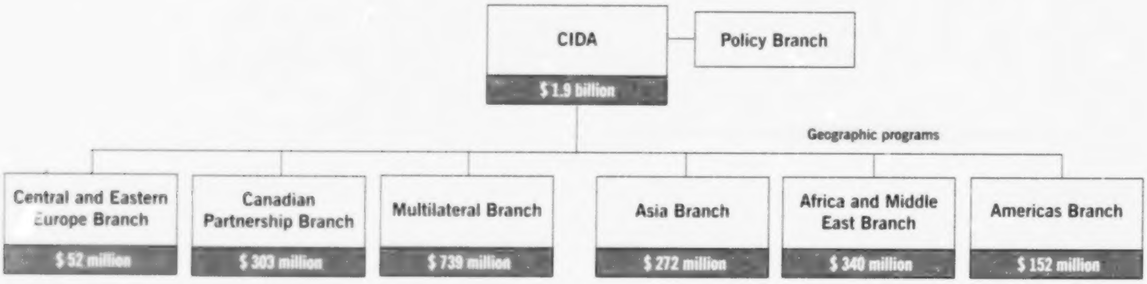
2.17 The Government of Canada has established six program priorities for Canadian official development assistance: basic human needs; gender equality; infrastructure; human rights, democracy, and good governance; private sector development; and the environment. As Canada's aid agency, CIDA gave almost $2 billion in official development assistance to developing countries and multilateral organizations in 2002. Sustainable development is at the core of CIDA's mandate. A profile of CIDA is presented in Exhibit 2.1 and includes an organization chart with funding levels. These funds were targeted at a broad range of sectors, including education, health, transport, energy, agriculture, and forestry.

2.18 CIDA has made commitments to achieving long-term project sustainability. The Agency's 2002 policy statement titled Strengthening Aid Effectiveness signalled a shift from a project-by-project approach to aid delivery to a focus on the country level, based in part on the recipient country's needs and priorities. The policy was shaped around several principles of effective development, including local ownership, stronger partnerships with recipient countries, and a results-based approach to project and program design and delivery.

2.19 CIDA has also made commitments to achieving environmental sustainability. Decades ago, the Agency set out to ensure that consideration was given to the environment at the design stage of projects. CIDA has since designated the environment as a "cross-cutting theme." CIDA's 1992 Policy for Environmental Sustainability (still in effect today) and its sustainable development strategies require environmental considerations to be integrated into all decision making and activities of the Agency.

2.20 In recent years, CIDA's funds for environmental issues, such as biodiversity, climate change, and pollution prevention and control, have averaged about nine percent of its budget. These funds support a range of country-to-country projects and contribute to non-governmental organizations, international financial institutions, and United Nations agencies.

Exhibit 2.1 **CIDA's spending on official development assistance, 2002–03**



Supports democratic development and economic liberalization of countries of Central, South, and Eastern Europe

Supports projects proposed by non-governmental organizations, universities, and the private sector

Contributes to international financial institutions such as the World Bank and the Global Environment Facility

Deliver aid through country-to-country programming and direct links to government organizations in developing countries. Total spending for the three geographic programs/branches is $764 million.

Source: CIDA

Challenges in development assistance

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Water from a treated system (left) and community drinking water (right). [illegible], Northern Region, Ghana

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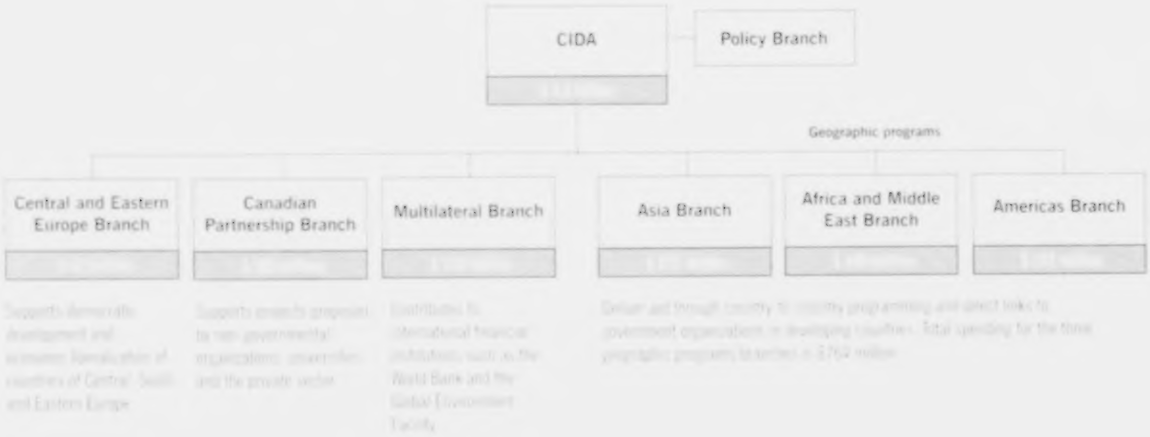

CIDA
Policy Branch
Geographic programs
Central and Eastern Europe Branch
Canadian Partnership Branch
Multilateral Branch
Asia Branch
Africa and Middle East Branch
Americas Branch
Supports democratic development and economic liberalization of countries of Central, South and Eastern Europe
Supports projects proposed by non-governmental organizations, universities, and the private sector
Contributes to international financial institutions such as the World Bank and the Global Environment Facility
Deliver aid through country-to-country programming and direct links to government organizations in developing countries. Total spending for the three geographic programs branches is $762 million.

Source: CIDA

2.21 The Government of Canada has also made environmental and sustainable development commitments that are specified in various international conventions, protocols, declarations, and summits. In this chapter, we refer to these documents collectively as agreements. The articles and provisions contained in the agreements range from statements of principle through to quantifiable targets. Not all of these agreements have the same legal status. Normally, formal conventions and protocols are considered legally binding under international treaty law, while summits and declarations are not considered legally binding.

2.22 There is no multinational environmental agreement that deals solely with water. Rather, water concerns are reflected in numerous agreements, including the following:

- Agenda 21 from the 1992 United Nations Conference on Environment and Development;
- the 1994 Convention to Combat Desertification (legally binding—entered into force in 1996);
- the Millennium Declaration, which includes the Millennium Development Goals (2000); and
- the World Summit on Sustainable Development (2002).

Did you know?

- Year that CIDA was created: **1968**
- Number of countries where CIDA provides foreign aid: **about 150**

2.23 These agreements reaffirmed previously stated goals, set new directions for development assistance, and identified areas where more emphasis was needed. In Canada, several federal departments may have a role in implementing them. These four agreements impose obligations on developed countries to assist developing countries, and therefore CIDA has a significant role in implementing them. In our view, whether or not these agreements and the water-related commitments they contain are legally binding, CIDA has the management responsibility to

- define the performance expectations and means necessary to achieve the objectives of the agreement,
- measure and report performance toward achieving the objectives, and
- review performance and take appropriate measures or corrective action to ensure that the objectives are achieved.

2.24 In response to a 1993 audit by the Office of the Auditor General, the Agency committed to improving accountability for achieving results. In 1996, it announced its Policy Statement on Results-based Management. The period between 1993 and 1996 was an opportunity to develop performance measures throughout the Agency arising from commitments contained in international agreements such as Agenda 21 and the Convention to Combat Desertification, as well as in CIDA's Policy for Environmental Sustainability.

Focus of the audit

2.25 The overall audit objective was to determine the extent to which CIDA is meeting and measuring its environmental and sustainable development commitments through its policies, programs, and projects in developing countries.

2.26 We examined the extent to which CIDA management has set measurable, specific, and consistent direction for water-related commitments and its environmental and sustainable development commitments.

2.27 In the Agency's Geographic branches, we reviewed whether country programming reflects the directions set for these commitments. We considered how the needs and priorities of developing countries are integrated into CIDA's country programming. In addition, we examined whether selected projects are designed and delivered in an environmentally responsible and sustainable manner and are achieving expected results.

2.28 For the purposes of this audit, we divided the various commitments into three broad categories related to water, to environmental sustainability, and more generally to long-term sustainability. These are listed in Exhibit 2.2. Our audit approach to examining these commitments is shown in Exhibit 2.3.

Exhibit 2.2 **CIDA commitments we audited**

Water commitments

Providing access to safe drinking water
Providing sanitation
Managing water resources in an integrated manner
Combating desertification

Environmental sustainability commitments

Integrating environment in all programs and projects as a cross-cutting theme
Providing environmental assessments

- Consider scope, cumulative effects, alternatives, mitigation, and public consultation
- Integrate environment early into planning and decision making

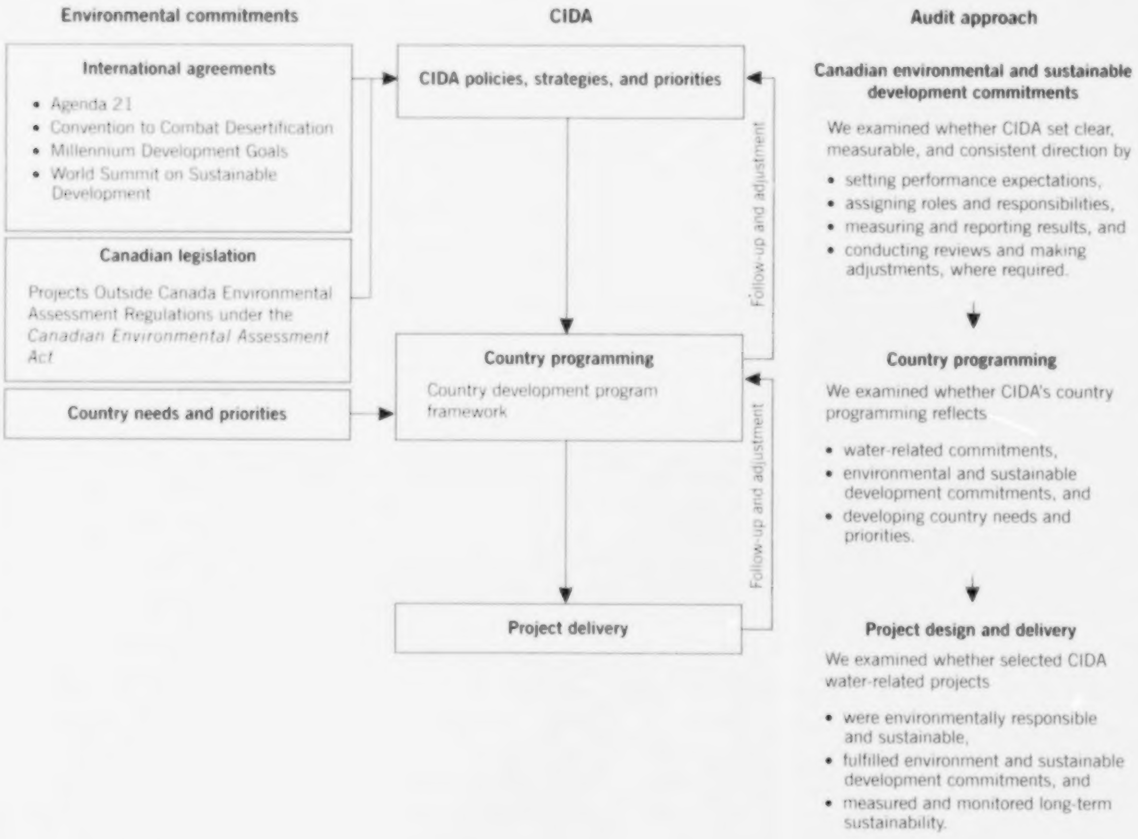
Long-term sustainability commitments

Local ownership
Participatory approach
Partnerships
Donor co-ordination
Monitoring and measuring long-term impacts of projects
Examining lessons learned and applying them in future programming

2.29 We selected nine projects for examination: three in each of Ghana (see Ghana map, page 9), Honduras (see Honduras map, page 10), and Indonesia (see Indonesia map, page 11). CIDA has a history of providing development assistance in these countries, including activities related to water issues. All nine projects we examined were water-related, dealing with matters such as supply, sanitation, food production, watershed management, and irrigation systems. Since 2003, CIDA has designated Ghana and Honduras, among others, as countries of focus.

2.30 More information on the audit is found in **About the Audit** at the end of the chapter.

Exhibit 2.3 **Our audit approach to examining CIDA's commitments**


Environmental commitments
CIDA
Audit approach
International agreements
Agenda 21
Convention to Combat Desertification
Millennium Development Goals
World Summit on Sustainable Development
Canadian legislation
Projects Outside Canada Environmental Assessment Regulations under the Canadian Environmental Assessment Act
Country needs and priorities
CIDA policies, strategies, and priorities
Country programming
Country development program framework
Project delivery
Follow-up and adjustment
Follow-up and adjustment

Canadian environmental and sustainable development commitments

We examined whether CIDA set clear, measurable, and consistent direction by

- setting performance expectations,
- assigning roles and responsibilities,
- measuring and reporting results, and
- conducting reviews and making adjustments, where required.

Country programming

We examined whether CIDA's country programming reflects

- water-related commitments,
- environmental and sustainable development commitments, and
- developing country needs and priorities.

Project design and delivery

We examined whether selected CIDA water-related projects

- were environmentally responsible and sustainable,
- fulfilled environment and sustainable development commitments, and
- measured and monitored long-term sustainability.

Ghana

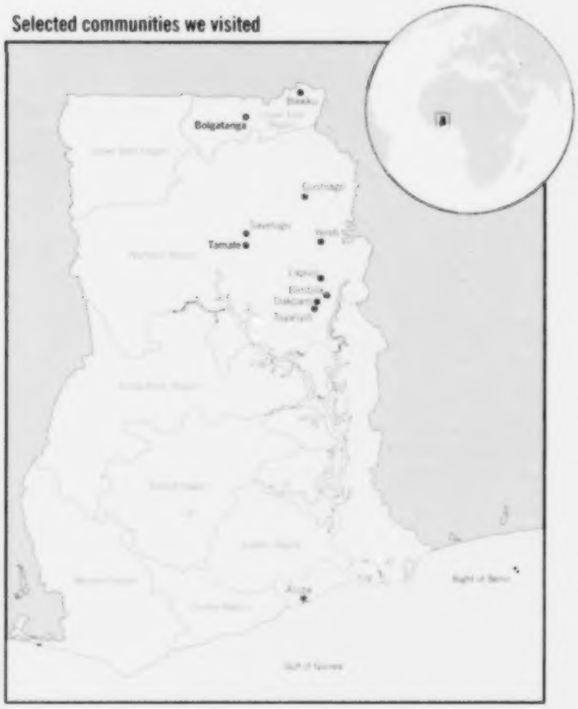
Population:	19.9 million
Population growth each year:	1.7%
Gross national income (per person):	US$290
Percentage of Ghanaians that make less than US$1 a day:	44.8%
Percentage of Ghanaians that do not have access to an improved water source:	27%
Percentage of Ghanaians that do not have access to improved sanitation:	28%

Issues affecting the environment:

recurrent drought in the north, deforestation, overgrazing, soil erosion, habitat destruction, water pollution, inadequate supply of potable water

Source: World Bank (2001 data)

Selected communities we visited



Community Water Project

1991–2000
$15.9 million

The goal of the project was to improve the health of rural communities in the upper east and west regions of Ghana and their ability to sustain water supply systems.

The project restored 2,600 boreholes and hand pumps that CIDA and its Ghanaian partner had installed in the 1970s and, where restoration was not possible, replaced non-functioning boreholes. The project transferred responsibilities to the rural communities to plan, manage, and maintain the new or restored water systems.

Northern Region Water and Sanitation Project

1998–2007
$16.4 million

The project is designed to improve the health of about 420 rural communities in northern Ghana that are affected by the inadequate supply of potable water and sanitation facilities.

The project will construct 720 water points (650 boreholes and 70 hand-dug wells) and up to 14,000 household latrines. It is designed to help local governments and communities strengthen their capacity to manage rural water supplies and sanitation services sustainably.

Tuma Water and Sanitation Project
(Hand-dug Well project)

1999–2001
$202,000

This project, done in partnership with Canadian and Ghanaian non-governmental organizations, was established to improve the quality of life of people in 15 communities in the Savelugu/Nanton District, Northern Region, Ghana. The project installed protected hand-dug wells and sought to

- enable people to acquire access to safe drinking water and to practice good sanitation,
- reduce guinea worm disease by 50 percent,
- reduce women's workloads and create better conditions for female children, and
- create a better environment to retain qualified people for sustainable development of the communities.

Honduras

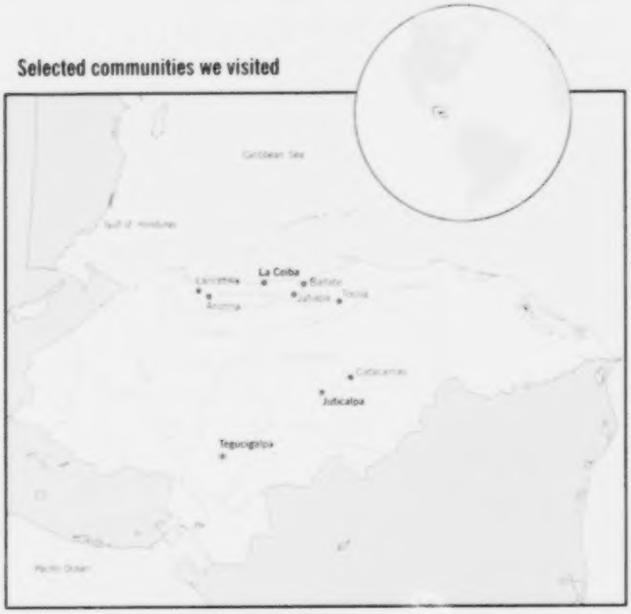
Population:	6.6 million
Population growth each year:	2.6%
Gross national income (per person):	US$910
Percentage of Hondurans that do not have access to an improved water source:	12%
Percentage of Hondurans that do not have access to improved sanitation:	25%

Issues affecting the environment:

increasing urban population, deforestation from logging and clearing land for agriculture, soil erosion, water pollution from mining

Source: World Bank (2001 data)

Selected communities we visited



Guayape Valley Agricultural Development Project
(Guayape Agriculture and Irrigation project)

1996–2001
$12.1 million

The aim of this project, the last phase of three, was to improve the sustainable productivity of 300 small farms in the Guayape Valley, reduce deforestation, and protect biodiversity. The project also trained local partners to manage water resources in the Valley and provide environmental education to children.

The project installed about 50 irrigation systems and used agro-forestry techniques to diversify and intensify the production of fruits and coffee. It also helped producers find a market for their products to ensure long-term sustainability.

Sustainable Water and Sanitation Project
(Microwatershed and Sanitation project)

1996–2001
$4.3 million

The goal of the project was to improve the health and quality of life of the rural population in four departments (regions) of northern Honduras. The project provided sustainable potable water systems and basic sanitation to 14,000 inhabitants.

Project activities included fencing protected upstream watersheds and constructing water dams and distribution systems to downstream beneficiaries. The project also trained local communities and Honduran government agencies in sustainable system operation, maintenance, and administration.

Broadleaf Forest Development Project
(Broadleaf Agro-forestry project)

1996–2001
$6.9 million

This was the last phase of a 12-year initiative. It was designed to reduce the deforestation rate in the Atlantic coastal region of Honduras by promoting management of woodlots by foresters and increased use of agricultural land. The project trained and provided technical assistance to government employees involved in the protection and conservation of the broadleaf forest.

The project helped families in 81 communities in the tropical forest to stay on their land and improve their quality of life. It taught the communities different agricultural and forestry techniques that do not damage the forests (for example, how to diversify crops and grow wood for cooking).

Indonesia

Population:	209 million
Population growth each year:	1.3%
Gross national income (per person):	US$680
Percentage of Indonesians that make less than US$1 a day:*	7.5%
Percentage of Indonesians that do not have access to an improved water source:	22%
Percentage of Indonesians that do not have access to improved sanitation:	45%

Issues affecting the environment:

deforestation, water pollution from industrial waste and sewage, air pollution in urban areas, smoke and haze from forest fires

Source: World Bank (2001 data)

*(2002 data)

Selected communities we visited

Manado
Makassar
Banda Sea
Andaman Sea
Celebes Sea
Pacific Ocean
Indian Ocean
Jakarta
Banda Sea
Arafura Sea
Timor Sea

North Sulawesi Water Resources Institutional Development Project

(Capacity Development Irrigation project)

1989–2000
$17.8 million

The goal of the project was to improve the development and use of water resources in the province of North Sulawesi by strengthening the capabilities of the Ministry of Public Works and affiliated local units in management, planning, design, construction, and maintenance of water resource works. The project

- provided technical training and assistance;
- provided buildings, vehicles, and instrumentation;
- conducted long-term planning of the river basin, irrigation, and other water infrastructures; and
- helped develop local water-user associations among rice farmers.

Sulawesi Rural Community Development Phase 4

(Rural Water and Sanitation project)

1999–2001
$1.575 million

The goal of the project was to improve basic human needs by enhancing the health of 33,000 residents in 44 villages on the island of Sulawesi. The executing agency assisted villagers whose access to water and sanitation was inadequate. Project activities involved

- construction of gravity-fed water systems to serve individual households,
- hygiene and health education programs, and
- creation of water maintenance committees in the villages.

The health and sanitation benefits included a decrease in the incidence of diarrhea and skin disease.

UNICEF Participatory Development Project

(Maternal Water and Sanitation project)

1995–2001
$13.3 million

The goal of the project was to improve maternal health and women's access to safe water supply and environmental sanitation facilities.

The project delivered assistance for selected components of the Government of Indonesia/UNICEF Program of Cooperation in three provinces, including South Sulawesi. The CIDA portion supported maternal and neonatal health care, water supply and environmental sanitation, and capacity building at the community level.

The project was expected to contribute to a reduction in the incidence of water and airborne diseases, particularly among women and children, through access to, and community control over, safe drinking water.

Observations and Recommendations

2.31 **A broad policy agenda developed over time.** In response to international agreements and to address its own priorities, CIDA has adopted many commitments over time. These comprise a mix of policies, guidelines, statements, and strategies, some of which are listed in Exhibit 2.4. They are varied and wide-ranging, dealing with such topics as gender, agriculture, biodiversity, and human rights. Some have resources specifically targeted to them; others do not.

Implementing water-related commitments

2.32 Water issues have been a central focus of development in CIDA for the past several decades. Although CIDA does not have a policy or framework specific to water, water issues are reflected in various priorities and policies, such as CIDA's Policy on Meeting Basic Human Needs and its Social Development Priorities.

2.33 CIDA has accepted water-related commitments contained in Agenda 21, the Convention to Combat Desertification, the Millennium Development Goals, and the World Summit on Sustainable Development. Among other things, the commitments address drinking water supply, sanitation, water conservation, and adoption of an integrated approach to water resource management. We wanted to know whether CIDA had set specific goals and targets for itself and whether country programming and project selection had changed as a result. We examined some of the actions that CIDA has taken in response to these agreements.

Specific direction not set

2.34 **Agenda 21.** The 40-chapter Agenda 21 from the 1992 United Nations Conference on Environment and Development addresses a large range of issues for sustainable development. One of the chapters is on water. In 1993, CIDA issued its *Friendly Guide to Agenda 21*, announcing that water issues would be key for future programming. This is the only guidance issued, and it is still applicable today. The Guide was intended to make Agenda 21 functional for CIDA officials; however, it did not establish any specific responsibilities or identify specific performance expectations at the project, country, branch, and Agency-wide levels. CIDA could not provide us with evidence that it had assessed the level of resources it would need to implement these water-related commitments.

2.35 **Convention to Combat Desertification.** It is generally recognized that combating desertification includes, but is not limited to, sustainable management of water resources. CIDA is the official lead agency, on behalf of the Government of Canada, for this legally binding Convention. The government reviewed CIDA's existing programming in relation to the new commitments contained in the Convention, and it concluded that the Agency's commitments could be met within existing budgetary allocations. In fact, for the five years following ratification of the Convention, CIDA projected a substantial decline in allocated resources. According to the Agency, in 2001–02 it spent over $640 million on projects that contribute, directly or indirectly, to combating desertification.

Exhibit 2.4 Selection of international agreements and CIDA's expectations

International agreements		CIDA's expectations
UN Conference on the Human Environment	1972	
Brundtland Report, *Our Common Future*, defines sustainable development	1987	
UN Conference on Environment and Development • Agenda 21 (Chapter 18 on water) • Convention on Biological Diversity • UN Framework Convention on Climate Change	1992	• Policy for Environmental Sustainability • *Canadian Environmental Assessment Act* received royal assent
	1993	*Friendly Guide to Agenda 21*
UN Convention to Combat Desertification	1994	Lead Canadian agency for the implementation of the Convention to Combat Desertification
	1995	• Canada in the World—Canada's Foreign Policy Statement – six program priorities of Canada's Official Development Assistance (Environment is a priority) • *Canadian Environmental Assessment Act* came into force • Policy on Women in Development and Gender Equity (updated in 1999 as gender equality)
Organization for Economic Cooperation and Development's *Shaping the 21st Century* contains international development goals and principles	1996	• Policy Statement on Results-Based Management • Policy on Poverty Reduction • Policy on Human Rights, Democratization and Good Governance • Gender and Environment are cross-cutting themes across all CIDA programming • Projects Outside Canada Environmental Assessment Regulations
Kyoto Protocol	1997	• Sustainable Development Strategy 1997–2000 • Policy on Meeting Basic Human Needs
UN Millennium Development Goals includes goal 7–to ensure environmental sustainability and target 10–to halve the number of people without access to safe water and sanitation by 2015	2000	Social Development Priorities
Stockholm Convention on persistent organic pollutants (POPS)	2001	Sustainable Development Strategy 2001–2003
• International Conference on Financing for Development—Monterrey Consensus • World Summit on Sustainable Development produced the Plan of Implementation • G8 Summit in Kananaskis—The New Partnership on Africa's Development and the Africa Action Plan	2002	• Policy Statement on Strengthening Aid Effectiveness • Statement on Countries of Focus • Canada Fund for Africa
	2003	Policy Statement on Agriculture
	2004	Sustainable Development Strategy 2004–2006

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	2003	Policy Statement on Agriculture
	2004	Sustainable Development Strategy 2004–2006

2.36 CIDA has undertaken various activities to promote programming related to desertification. In particular, it has produced a Desertification Toolkit to guide CIDA officials on how to address related issues during project design. Use of the Toolkit is discretionary. The Agency has yet to identify specific goals or targets for programming. CIDA reports biennially to the United Nations on its implementation of the Convention. These reports are illustrative, describing activities related to individual projects and programs, but they do not summarize overall results. Thus, the Agency does not know the extent to which it is making a difference.

2.37 **Millennium Development Goals and World Summit on Sustainable Development.** CIDA has accepted the Millennium Development Goals (see Appendix). The goal (goal 7) of ensuring environmental sustainability includes a global target (target 10) to halve the number of people without access to safe water and sanitation by 2015. This target was reaffirmed at the World Summit on Sustainable Development. We found that CIDA has started to put in place mechanisms for country programming to report on the Agency's contribution to this target. However, it could not provide us with evidence that measurable performance expectations have been set; nor has it established specific roles and responsibilities for meeting this goal.

Did you know?

- Number of people worldwide who lack access to safe drinking water: **1 billion**
- Number of people who do not have access to proper sanitation: **2.4 billion**

2.38 **Little attention paid to results management.** Overall, for the commitments we reviewed, CIDA has not set specific corporate performance expectations or assigned explicit roles and responsibilities. It is not able to measure and report on overall results. In all but one of the agreements, CIDA could not provide evidence that it had conducted a subsequent review to determine whether programming needed to be adjusted to achieve the water-related commitments. In our view, this lack of stated expectations is a serious shortcoming in the design of water programming, and it has significant implications. First, CIDA does not know the extent to which it is making progress against its water-related commitments. Second, and equally important, this shortcoming affects CIDA's preparation of country programs and its design and delivery of projects.

Missing links to water-related commitments in country programming and projects

2.39 CIDA states that its policies and priorities are linked to country programming through country development programming frameworks or their equivalent. Throughout our fieldwork, many people told us that CIDA was responsive to countries' needs. We found that CIDA's country programming documents, which define how aid is delivered country to country, reflect the expressed environmental and sustainable development needs and priorities of the recipient countries.

2.40 We examined whether country programming in Ghana, Honduras, and Indonesia reasonably reflected CIDA's water-related commitments in the four agreements we reviewed. We found that the programming documents for all three countries identify water issues as an area of programming and make general references to water-related topics addressed by the agreements. Yet, even where it would have been appropriate to do so, the documents do not set performance expectations for CIDA's water-related commitments. There is little evidence that Agenda 21, for example, has had or is having an explicit influence on country programming.

CIDA needs to rationalize its expectations

2.41 CIDA has established a large body of expectations that CIDA officials are expected to integrate into country programming and projects, where appropriate. To help them understand these expectations, the Agency has developed a complex "RoadMap." Among other things, it identifies 6 program priorities, 12 program principles, and 10 or more major policies, as well as analyses to undertake, management tools to use, and a host of procedures to be followed.

2.42 At CIDA headquarters and in the countries we visited, some CIDA officials expressed concern about the large number of commitments, in a range of policy areas, that they are expected to accommodate. Several remarked on the lack of available tools to focus and integrate their efforts. In effect, there are so many priorities and expectations, and their collective scope is so broad, that the real expectations of management are not clear.

2.43 CIDA lacks documentation on how its water-related commitments are to be addressed and the results measured. While individual projects have contributed to sustainable development, CIDA is not able to measure and report its success in addressing these commitments. The Agency's overall approach to water issues lacks coherence. CIDA reports that it has been working on, but has not completed, its first formal water policy framework.

2.44 **Recommendation.** The Canadian International Development Agency should review its water-related commitments in relation to its broader environmental and sustainable development commitments, with a view to updating and rationalizing them. On the basis of this review, the Agency should

- establish clear direction by setting priorities, objectives, and performance expectations;
- develop tools and guidance that simplify and link expectations to commitments in the context of Agency-wide polices and priorities, for use by personnel who prepare and support projects and country programs;
- emphasize an integrated approach to water resource management at both the project and country program levels;
- assign roles, responsibilities, and resources for action;
- implement practices to periodically review progress against established expectations and international commitments; and
- report overall progress against established expectations.

CIDA's response. The Agency accepts the recommendation. CIDA will review the nature and scope of its water-related commitments in the context of the renewal of its environmental policy framework and broader

Government of Canada commitments. Based on this review process, it will identify priorities for programming. Appropriate tools and guidance will be put in place by December 2005. Monitoring and reporting on progress will commence once the water policy framework is in place.

Building environmental sustainability into programs and projects

2.45 The second category of commitments we examined relates to ensuring the environmental sustainability of projects and programs (Exhibit 2.2). The environment is a program priority for CIDA. In recent years, CIDA's funds for environmental issues, such as biodiversity and pollution prevention and control, have averaged about nine percent of its budget. CIDA has also designated the environment as a cross-cutting theme, meaning it will assess the environmental impacts and opportunities in all projects, programs, and policies, and use this information in its decision making. This is because aid projects have the potential to cause unintended harm and must therefore be properly planned and delivered. Furthermore, paying proper attention to the environment also supports and enhances development goals in areas such as human health, agriculture, and economic development.

Limited progress in implementing the Policy for Environmental Sustainability

2.46 CIDA's 1992 Policy for Environmental Sustainability set direction for the Agency and had the potential to substantially influence its decision making. CIDA intended to apply this policy through a series of commitments as part of an implementation strategy. These commitments included detailing priorities at the branch and sector levels; reallocating funds; ensuring local expertise; providing guidance, tools, and training for staff; analyzing and disseminating information on environmental issues; and monitoring the environmental performance of its programs and projects.

2.47 The implementation strategy was never developed. Instead, CIDA decided in 1993 to prepare progress reports and identify priority action for environmental sustainability to be included in its regular corporate planning process. In its 1997 Sustainable Development Strategy, CIDA committed to updating its Policy for Environmental Sustainability; it has not done so.

2.48 CIDA prepared only two internal progress reports on corporate achievements related to the policy, one in 1993 and the other in 1995. Both raised concerns about inconsistent implementation. The 1995 report in particular called for more systematic monitoring of environmental performance in the field. The Agency has not reported on the progress of the policy since 1995.

Shortcomings of project environmental assessments

2.49 CIDA introduced environmental assessment in the 1970s as a key means to integrate environmental considerations into projects and to ensure that they are environmentally responsible. The 1992 *Canadian Environmental Assessment Act* (entered into force in 1995) provides the legislative requirement for environmental assessment of development projects. Properly done, an environmental assessment can help to avoid or mitigate damage and can be a powerful planning tool by identifying opportunities to improve project design, enhance project benefits, and contribute to sustainable development. We examined nine water-related projects to determine the extent to which environmental assessments were done properly.

2.50 **Environmental assessment was treated as a paper exercise in the projects examined.** When an environmental assessment was done, as for eight of the projects we examined, it was treated simply as a process on paper to be complied with, rather than a project planning tool. We have some concerns (Exhibit 2.5). For example, CIDA's procedures require a preliminary environmental assessment to be completed prior to project approval to determine the need for and type of subsequent environmental assessment. In two of the projects we examined, preliminary environmental assessments were completed years after the projects began, and thus appropriate decisions were not made on a timely basis.

2.51 Environmental assessment documents that we reviewed were generally weak sources of information on project-specific environmental impacts and measures to mitigate adverse impacts. In some cases, the environmental assessment screening reports were incomplete. For example, in the Northern Region Water and Sanitation project in Ghana, the scope of the environmental assessment failed to consider potential environmental and socio-economic effects associated with the construction of 14,000 household pit latrines. Notably, while CIDA described groundwater extraction as a likely adverse environmental effect, it ultimately dismissed the issue as not a significant concern. A more thorough assessment of this groundwater issue may have led to consideration of alternative ways to implement the project or to an alternative project (see Assessing the impacts on groundwater, page 19).

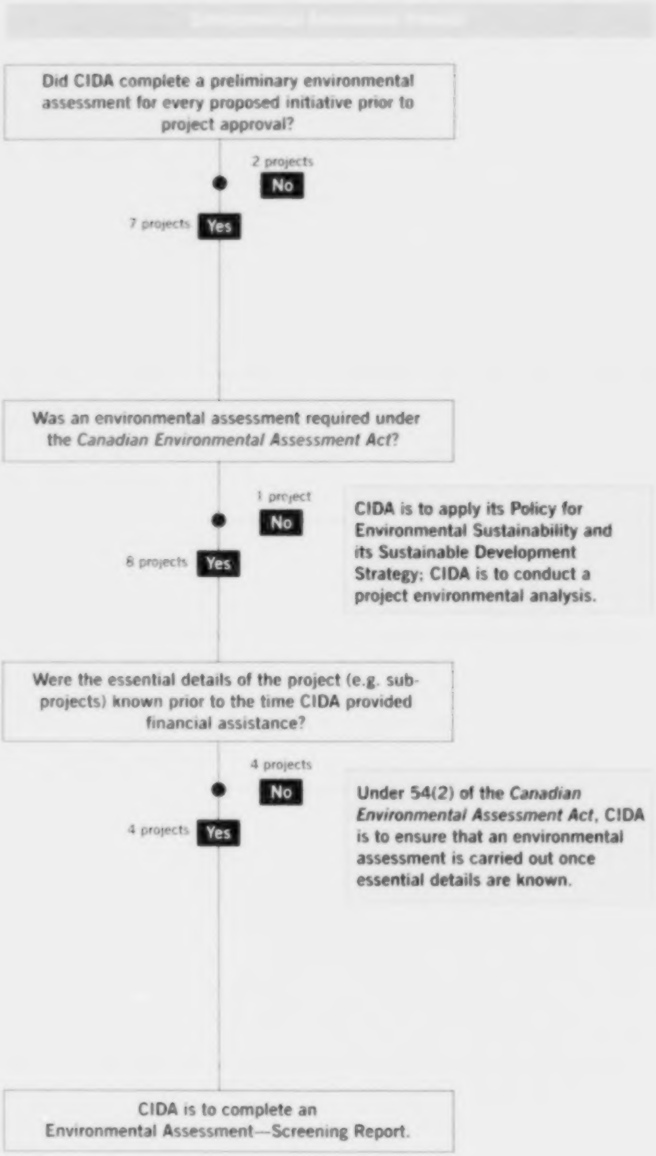
Women pumping water from a borehole. Dakpam, Nanumba District, Northern Region, Ghana.

2.52 CIDA did not ensure that supplemental environmental assessments were properly completed. Where the "essential project details" (for example, location, nature of project activities, and sub-projects) are not known prior to project approval and financing, CIDA is obliged to ensure that a supplemental environmental assessment is done for the project or sub-projects as soon as the essential details become known. To conduct this supplemental assessment, CIDA may rely on another country's process, provided it is consistent with Canada's assessment process. We found that CIDA did not take adequate measures to ensure that the supplemental environmental assessments were properly completed in three of the projects we looked at.

2.53 In our view, the spirit of environmental assessment was missing. The processes and documentation we reviewed did not provide assurance that the projects were designed in an environmentally responsible way. CIDA reports that it has recently taken measures to ensure compliance with the *Canadian Environmental Assessment Act* in response to internal audits conducted in 2000 and 2003.

2.54 In addition to reviewing documents on file, we also examined the manner in which CIDA designed and delivered projects in the field. In each country, we encountered dedicated and knowledgeable CIDA personnel. The projects we examined illustrated a wide range of practices. Some, in our view, effectively integrated environmental considerations. In Honduras, in particular, CIDA has taken an integrated watershed approach to its projects. In Ghana and Indonesia, we observed projects that were more limited in the extent to which they incorporated environmental considerations.

Exhibit 2.5 **The environmental assessment process for CIDA projects and what we found**



Did CIDA complete a preliminary environmental assessment for every proposed initiative prior to project approval?

Was an environmental assessment required under the *Canadian Environmental Assessment Act*?

CIDA is to apply its Policy for Environmental Sustainability and its Sustainable Development Strategy; CIDA is to conduct a project environmental analysis.

Were the essential details of the project (e.g. sub-projects) known prior to the time CIDA provided financial assistance?

Under 54(2) of the *Canadian Environmental Assessment Act*, CIDA is to ensure that an environmental assessment is carried out once essential details are known.

CIDA is to complete an Environmental Assessment—Screening Report.

What we found

Was a preliminary environmental assessment completed prior to project approval?

- For the Broadleaf Agro-forestry project in Honduras, a preliminary environmental assessment was conducted two years after the project was approved.
- For the Guayape Agriculture and Irrigation project in Honduras, a preliminary environmental assessment was conducted three years after the project was approved.

- The majority of CIDA's projects are not subject to rigorous environmental analysis.

Did CIDA ensure that environmental assessments were conducted consistent with the *Canadian Environmental Assessment Act*?

- For the Maternal Water and Sanitation project and the Rural Water and Sanitation project in Indonesia, project activities were started before CIDA conducted environmental assessments. Assessments were conducted only after an internal review by CIDA identified a lack of compliance.
- The preliminary environmental assessment for the Broadleaf Agro-forestry project in Honduras recorded that CIDA was to rely on a foreign environmental assessment. However, we found no evidence that the environmental assessment had been completed or that the foreign process was consistent with the requirements of the *Canadian Environmental Assessment Act*.

Was a Screening Report done and how complete was it?

- For the Northern Region Water and Sanitation project, the environmental assessment did not consider the full scope of project activities, cumulative environmental effects, alternatives, and mitigation measures.

Source: CIDA

Key guidance is missing

2.55 **Dealing with projects outside the *Canadian Environmental Assessment Act*.** CIDA reports that about 90 percent of all its initiatives fall outside the requirements of the Act. This is partly because the nature of CIDA's projects has shifted away from physical works toward institutional strengthening and capacity development. In addition, some projects that have physical impacts are excluded from the Act. In these cases, CIDA urges its officials to conduct a project environmental analysis. This analysis is discretionary, however, and the Agency's guidance on how to perform it is limited in scope. Given these shortcomings, CIDA cannot ensure that any significant environmental effects associated with projects not covered by the Act would be mitigated in a timely manner.

2.56 **The need for environmental sustainability in country programming.** Beyond general policy direction, CIDA has not explained in detail how it will analyze and measure the environment across all its decision making and activities. In country programming, CIDA has not put in place some of the

Assessing the impacts on groundwater: The Northern Region Water and Sanitation project in Ghana

> Water resources developments can be risky if they are planned without a thorough understanding of the long-term availability of the basic water resource. Wells and boreholes are unsuccessful when insufficient attention is paid in the planning stages to the quality and probable quantity of the groundwater in local aquifers. The acquisition and analysis of data on surface water and groundwater resources is . . . a necessary precondition for successful water projects—CIDA.

This case illustrates the importance of completing a thorough assessment of groundwater extraction projects, which can have serious negative environmental effects. The environmental assessment of the Northern Region Water and Sanitation project identified groundwater draw-down as a likely adverse environmental effect. The assessment concluded that there would be no significant negative impact on the groundwater table because there had been no observable change in groundwater levels in 50 observation wells. Yet these wells were not located in the same region as the Northern Region Water and Sanitation project.

There are limited data on and knowledge of the potential environmental impacts of the increasing exploitation of groundwater resources in northern Ghana. Water tables have also dropped drastically in some parts of northern Ghana. However, it is not clear whether this information was considered in the environmental assessment, given that it was completed in one day.

The potential cumulative environmental impacts on groundwater were also not considered. For instance, the impact on an aquifer from 700 water extraction points in one project can be significant. The impact can be more significant if there are more water points drilled by other projects in the region or if intense irrigation is drawing on the same aquifer.

The Project Implementation Plan noted that no groundwater monitoring programs are in place in the project districts and that this is a major constraint on assessing groundwater potential. While the project required that the quality and quantity of groundwater be measured, it did not identify mitigation measures if problems were found. The environmental assessment simply noted that "if difficulties arise the project will react accordingly."

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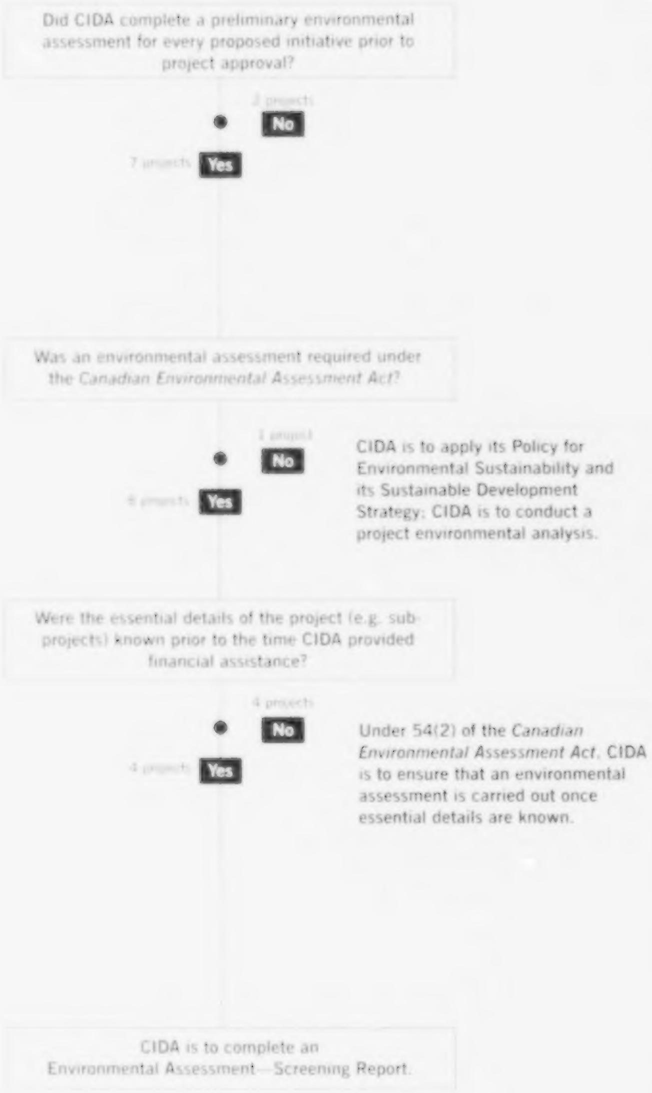

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7 projects **Yes**

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8 projects **Yes**

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basic definitions, guidance, and tools required to integrate environmental sustainability. The nature of the environmental analyses of country programs and the questions to ask about them differ from those of projects. For example, how does programming in one sector, such as water, affect another sector, such as agriculture, in the same country? In our view, existing guidance is insufficient to provide answers for critical planning and decision making at the country level.

Reporting on environmental performance is limited and inconsistent

2.57 While CIDA reports funding for aid under the category of environmental sustainability, it does not adequately report on how the environment is a cross-cutting theme through all its projects. The standardized project-reporting templates used by the Agency since 1999 to capture annual project results do not include a separate provision for reporting on the environment. Furthermore, project-level performance indicators for the environment as a cross-cutting theme have not been specified. Performance indicators for the environment could include, for example, the proportion of land area covered by forest, or the amount of land or water to be protected for biodiversity.

2.58 In the country-level reports that were prepared and in the majority of performance reports from the Geographic branches, we found limited information on environmental results. One Geographic branch stated that there was no requirement to report on the environment as a cross-cutting theme.

2.59 The Agency also considers gender equality while working on projects and treats it in a more structured way than the environment. For example, an analysis of the gender component of all CIDA projects is mandatory, and the Agency has developed gender-related performance indicators. The standardized templates for project reporting include a separate section for information on the contribution of gender equality to overall development results. We found regular reporting on this element in the country-level reports, where these were prepared, and in the majority of the Geographic branch performance reports. In short, CIDA has taken a deliberate and results-oriented approach to gender equality. We believe that the same diligence could have been applied to the environment.

2.60 Overall, despite some efforts, CIDA has made limited progress in implementing the environment as a cross-cutting theme and integrating environmental sustainability into its decision making. It is missing significant opportunities to fully examine the environment and reflect it in all decision making. Apart from projects subject to the *Canadian Environmental Assessment Act*, we found tools, measurement, and reporting to be weak. Important elements envisioned in the Policy for Environmental Sustainability have not been realized. CIDA could better ensure that environmental analysis is applied in a timely and robust manner to all projects.

2.61 **Recommendation.** The Canadian International Development Agency should update its existing policy framework for achieving environmental

sustainability in all decision making and activities, ensure that adequate environmental analysis is applied to all projects, and develop the new guidance and tools needed to assess environmental sustainability at the country program or regional level.

CIDA's response. The Agency accepts the recommendation. CIDA is currently conducting analysis and assessing options for renewal of its environmental policy framework, including updating its 1992 Policy for Environmental Sustainability and developing selected sectoral strategies and an implementation plan. CIDA has formalized the implementation of the Strategic Environmental Assessment process within the Agency (to be effective 1 September 2004), and is in the process of developing several tools for the integration of the environment into projects, for use when the *Canadian Environment Assessment Act* does not apply. CIDA uses a Guide for Preparing a Country Development Programming Framework to ensure that such plans are consistent with CIDA's policy and programming priorities and that the programming orientation, among other things, reflects the environment as a cross-cutting theme. The effectiveness of this tool will be analyzed to ensure that environmental analysis is being effectively integrated into country and regional programming. CIDA will develop and deliver training to facilitate the use of the proposed tools.

Policy renewal will be completed by December 2005. Monitoring and reporting on progress will commence once the environmental policy framework is in place.

Ensuring the long-term sustainability of projects

2.62 The third category of commitments we examined relates to achieving the long-term sustainability of projects. In the context of bilateral aid, this means continuing project benefits after assistance from a donor has ended. Measures taken during implementation of the project will determine how sustainable the benefits will be.

Key principles are reflected in projects

2.63 Through its policy statement *Strengthening Aid Effectiveness* and its sustainable development strategies, CIDA has communicated a series of development principles designed to ensure the long-term sustainability of projects. We assessed, largely at the project level, whether principles concerning local ownership, participatory approaches, partnerships, and donor co-ordination were effectively in place. Where possible, we also assessed whether measures reflecting those principles had been successful to date.

2.64 **Local ownership**. It is now widely accepted that countries need to lead their own development strategies. Local ownership may involve possession of land or investment in physical infrastructure produced by a project. It has a strong focus on building the capacity of communities (and of partner organizations) to maintain these infrastructure assets, sustain their own social and economic progress, and replicate project activities on their own, as necessary.

2.65 The design documentation of most projects we examined had capacity development as a central component of the project objectives. Projects in Ghana and Honduras, for example, supported national initiatives aimed at decentralizing the country's water and sanitation sector by providing, at the community level, the knowledge and tools to manage and maintain water and sanitation infrastructure.

2.66 The majority of projects also helped establish community groups and train members in aspects such as organization, financial mechanisms, equipment maintenance, and hygiene. The inclusion and training of women in such groups was encouraged to further enhance local ownership. In many of the communities we visited, community groups formed during the projects were still working together and using the techniques and material provided by CIDA to share information and maintain their systems.

2.67 Several of the projects we examined had installed potable water infrastructure to be maintained and operated by local organizations. In communities in all three countries we examined, the projects had put in place financial systems to enable the local water committee to collect funds for system maintenance, such as the replacement of broken pipes. Recipient communities in Ghana, for example, were required to contribute five percent of the capital cost of the project to create a sense of ownership among residents.

2.68 **Participatory approach**. Sustainable development has a better chance of succeeding when local communities and individuals design and implement development programs and projects in a meaningful way. CIDA is required to make the participatory approach an explicit goal of its programs and projects.

A micro-watershed dam. Bambú, Balfate, Colón Region, Honduras.

2.69 In many of the projects we examined, CIDA had involved communities. For example, in Honduras, farmers helped design and implement sustainable crop and tree planting plans on their own properties, and communities were involved in constructing their own micro-watershed dam and distribution systems. Stakeholders we interviewed in all three countries often expressed appreciation for the way CIDA personnel brought community members into projects.

2.70 **Partnerships**. CIDA has committed to promoting long-term relationships between its Canadian partners and those in developing countries, including promoting openness in its environmental activities. We looked at how the sustainability of projects benefited from such partnerships and how the partnerships functioned or evolved after projects were completed.

2.71 The definition of the roles and responsibilities of partners is set out in project design documentation and typically describes partnerships with national government entities and occasionally with local governments, regional organizations, communities, and the private sector (see Examples of successful community participation and project partnerships, page 23). Many of the partnerships created are being maintained after projects are completed—for example, through CIDA's Canadian Co-operation Office in the recipient country. CIDA uses the partnerships to promote national policies in various sectors, including the environment.

2.72 Local and district government institutions may have regulatory responsibilities and the mandate to manage such things as community water supply and sanitation. Their capacity can determine how sustainable an aid project will be. However, rotating staff, shifting government priorities, and a lack of skilled personnel and other resources can undermine sustainability efforts. If local staff cannot fulfill those responsibilities, future benefits of projects cannot be assured. Accordingly, CIDA provided institutional strengthening to project partners in the majority of the projects we examined, primarily to administer and manage local development plans.

2.73 If partners are unable to fulfill their responsibilities, project results are at risk. CIDA requires project planners to assess such risks at the early stages of an initiative. The project approval documentation of most of the projects we examined highlighted risks such as the potential impacts of lack of capacity, lack of funding from country partners, and political considerations. We found that CIDA is taking action to manage those risks in delivering its projects.

Examples of successful community participation and project partnerships: The Broadleaf Agro-forestry project in northern Honduras

This case illustrates some examples of successful community participation and project partnerships in northern Honduras. CIDA's Broadleaf Agro-forestry project achieved integrated water management through the creation of management areas where sustainable forestry, agro-forestry, and agriculture practices were applied to protect watersheds. By protecting forested areas, planting fruit trees among crops, and promoting intensive and diversified agriculture instead of migratory farming, the project helped stabilize ecosystems, conserve biodiversity, generate water for human consumption, and provide sustainable natural resources to all watershed stakeholders. In total, the project helped protect 70,000 hectares of tropical forest along the northern coast of Honduras.

Forestry is a major economic driver in Honduras, where 85 percent of land is used for logging and agro-forestry activities. Government forest management efforts are undermined by regional illegal logging and migratory agriculture, which are destroying 5,000 hectares of forest each year. The project helped local communities manage their own forests and created partnerships and institutional structures to enforce plans to reduce deforestation.

The project involved communities delimiting more than 37 protected watershed areas. To resolve conflicts over the use of natural resources, it promoted dialogue among local stakeholders to reach agreements on land use and to establish regulations. The project's strategy was based on participation and sustainability. The project also worked in partnership with Honduras to create a fund for the sustainable management of national forests. In total, the project worked with over 1,000 foresters and 40 lumber associations to promote planning of sustainable forestry.

The Broadleaf Agro-forestry project worked with forestry groups, women's groups, and independent farmers in 81 rural communities of northern Honduras. It had over 40 institutional partners, including municipalities, decentralized governmental organizations, and the private sector.

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The Broadleaf Agro-forestry project worked with forestry groups, women's groups, and independent farmers in 81 rural communities of northern Honduras. It had over 40 institutional partners, including municipalities, decentralized governmental organizations, and the private sector.

2.74 **Donor co-ordination**. Because the field for assistance in developing countries is so broad, and because there are so many players, donor co-ordination has become a significant objective of CIDA. The Agency focusses its efforts in specific sectors (for example, forestry, agriculture, water, and sanitation) and in selected geographic areas (for example, the Island of Sulawesi in Indonesia and northern Ghana). In this context, co-ordination at the country programming level is essential. In the countries we visited, CIDA is working to put in place and support mechanisms to achieve better co-ordination of donors' efforts. In all three countries, CIDA was in regular contact not only with the national government and its agencies but also with other donors and civil society groups.

Lessons learned need to be captured and shared

2.75 CIDA is experimenting with different ways of achieving project sustainability. It is important to measure the effects of the experiments to determine what works or does not work, and why, in order to replicate successful elements in other projects. In the projects we reviewed, CIDA provided capacity development to enable communities to participate in their own development and to maintain the project benefits, at least in part, after the Agency was no longer involved. Yet lessons from these efforts were not being adequately captured and shared. For example, while all projects report on the number of people or communities trained during the project, the Agency was unable to provide us with evidence that it monitors the effectiveness of the training in sustaining benefits.

2.76 In order to enhance sustainability and expected results, CIDA needs to either evaluate the capacity of partners, particularly government partners, to fulfill their required roles in a project, or further involve local organizations in the region where the projects take place. Given the experimental nature of measures to assure sustainability, we encourage CIDA to assess the long-term effectiveness of the experiments, on a selective and strategic basis, and then apply the lessons learned.

Measuring and reporting results

2.77 **Project benefits.** CIDA needs clear, specific, and measurable information on results in order to plan and account for delivery of benefits at the project, country, and Agency-wide levels. According to CIDA, it has historically focussed its reporting, planning, and evaluation at the project level. The Agency uses Logical Framework Analysis for project design and approval. The Framework requires the identification of performance indicators to monitor progress toward expected results. It distinguishes between immediate benefits delivered within the timeframe of the project and longer-term benefits that will remain after the project is complete.

2.78 All but one of the projects we examined used Logical Framework Analysis and identified indicators of water-related benefits that were expected. Project planning and implementation for all three projects in Ghana and for the Rural Water and Sanitation project in Indonesia (see How measuring for results can be built into projects, page 25) used indicators to measure health and hygiene benefits and accessibility of water sources and sanitation facilities installed by the projects. The three projects in Honduras and the Capacity Development Irrigation project in Indonesia contained provisions to report on indicators of management toward the goal of either improving access to potable water or improving the development and use of water resources for agricultural production.

2.79 **Environmental sustainability.** Indicators can also monitor environmental impacts, report on the environment as a cross-cutting theme, and identify the project's contribution to the country development programming framework and international commitments. The Broadleaf

How measuring for results can be built into projects: The Rural Sanitation and Water project on Sulawesi Island, Indonesia

The Rural Sanitation and Water project, which provided piped water, latrines, and hygiene education to remote villages on Sulawesi Island, illustrates how measuring for results can be built into a project's Logical Framework Analysis. The information was used to develop a general work plan and detailed project designs, to review progress regularly, and to measure results.The project used baseline and close-out surveys and monthly project monitoring to collect information in each village.

Baseline and close-out surveys. In each village, five baseline surveys were conducted—social and economic health, technical details, household hygiene and gender, family sanitation, and village information. Examples include meteorology data, information on the distance of households to a water supply, the health of residents, existing water and sanitation facilities, and knowledge of personal hygiene.

As the project wrapped up, a close-out survey was conducted. Information from this survey was compared with the baseline survey to measure project results, such as

- levels of community knowledge and practice,
- gender awareness through training,
- achievements in water supply and sanitation construction, and
- level of community contribution.

Finally, the information was used for performance indicators of village health and villagers' economic well-being.

Monthly project monitoring. A system was designed to monitor and report, each month, village-level information for day-to-day project management and for performance measurement. The information included details on access to water, latrines built, number of women involved in project activities, and financial contributions in the villages.

Performance information from the surveys and monthly project monitoring was used to report on the Logical Framework Analysis. Once the project was completed, the Village Water and Sanitation Committee became responsible for maintaining basic record keeping and collecting user fees for operations and maintenance.

Village Water and Sanitation treasurer shows record keeping for several years after the project closed.

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Village Water and Sanitation treasurer shows record keeping for several years after the project closed.

Agro-forestry project in Honduras used indicators that were selected to manage for results through an integrated watershed approach to agriculture, forestry, and the environment. However, none of the other projects we looked at included indicators to monitor and report on environmental sustainability.

2.80 CIDA reviewed the results of the projects while they were underway, using various mechanisms such as third-party evaluations, interim reports from implementation agencies, and staff reports. However, as our Office first stated in 1993, development requires that after the termination of aid funding, something of value be left behind that can be sustained and that enables countries to better manage their own development. CIDA was unable to provide us with evidence that it measured long-term development results against identified indicators for any of the projects we examined. Without any provision for such measurement, the Agency cannot be sure of the sustainability of project results.

2.81 **Country-level performance measures.** In recent years, CIDA's activities have shifted from the project level to the country program level. The Agency now requires that projects demonstrate a clear contribution to the objectives of the country development programming framework before being approved. We assessed whether CIDA's country programming established a results-based framework that defined realistic expected results, clearly identified program beneficiaries, and measured progress toward results.

2.82 Ghana's programming framework sets out expected results for improved quality of life for poor groups in northern Ghana and for increased access to sustainable water services. While the framework includes statements of expected results, it does not specify a time frame for attaining these results. Nor does it assign roles and responsibilities for measuring progress or provide for reporting on the longer-term benefits that contribute to country programming. In programming documents for Honduras and Indonesia, we found no provision for measuring progress. Performance reports at the country level have been produced only in the Asia Branch.

2.83 In a recent pilot framework for country development programming, CIDA included the country's development goals and linked them to CIDA's Key Agency Results and the Millennium Development Goals. CIDA expects to be able to report progress in implementing the development goals for this country, which would, in turn, be reflected in the annual country performance reports. This approach, if expanded, could eventually be used to report on the Key Agency Results for the entire Agency.

2.84 **Corporate results.** CIDA has used a variety of reporting methods. From 1997 to 2001, it reported development assistance funds in the six program priorities. For these priorities, it reported against its Key Results Commitments in 2000 and began reporting against its Social Development Priorities in 2001. For 2002 and 2003, the Agency reported on assistance funds on the basis of its four strategic outcomes or Key Agency Results.

2.85 CIDA, like all donor agencies, faces many challenges in determining how to best summarize its performance at the corporate level. CIDA's corporate reporting on environmental results is largely based on project-level results and is illustrative and anecdotal. This does not provide overall performance information that gives a complete picture of the results achieved Agency-wide, for the environment as a cross-cutting theme, or for its international water-related commitments.

2.86 **Recommendation.** The Canadian International Development Agency should develop indicators of environmental sustainability and incorporate them into country programming and project design. The Agency should ensure that there is provision for post-project monitoring to assess the sustained contribution of projects to its country program objectives and its international commitments. CIDA should measure and report on overall progress toward achieving environmental sustainability at the project, country, branch, and Agency-wide levels to facilitate review and adjustment of programming where appropriate.

CIDA's response. The Agency accepts the recommendation. Following a feasibility assessment, CIDA will use environmental sustainability indicators, as appropriate, in the results-based management of its projects. Following assessment, CIDA will use existing environmental sustainability indicators, as appropriate, in each new, or updated, country or regional programming framework. On a limited and sample basis, CIDA will conduct post-project assessment of environmental and sustainable development results to guide future sustainability efforts.

If analysis supports the use of indicators, specific indicators will be selected and in use by December 2005.

Conclusion

2.87 In this audit, we set out to determine how CIDA integrates its varied environmental and sustainable development commitments into its policies, programs, and projects.

2.88 CIDA is contributing toward meeting established environmental and sustainable development needs through its long-standing program activities and projects. The Agency is active in addressing water issues, and our audit indicated that the projects we reviewed are benefiting people in developing countries.

2.89 CIDA management has not set measurable, specific, or consistent direction for its water-related commitments, and it is not measuring and reporting overall progress against them in a coherent and directed fashion. CIDA reports on its accomplishments anecdotally but does not know the extent to which it is meeting these commitments. Without a clear idea of what CIDA has set out to accomplish, Parliament, Canadians, and the international community do not know the significance of the collective results of the Agency's projects and programs. CIDA needs to update and rationalize its priorities and expectations and direct resources and efforts toward producing tangible results against its objectives.

2.90 The country development programming frameworks for the three countries we examined reflect the needs and priorities of the respective countries. Water was an identified area of programming for all three countries. The lack of clear and specific direction from senior management affects all levels in the Agency. In the face of many competing priorities, CIDA personnel responsible for developing country programs and projects are unclear about management's expectations. There is little evidence that international agreements we examined, such as Agenda 21, have had or are having an explicit influence on country programming.

2.91 CIDA has established an objective of building environmental sustainability into all Agency decision making and activities, largely through environmental analyses of country programs and projects. However, despite some efforts, the Agency has not put in place the required direction, guidance, and analytical tools; as a consequence, it has made limited progress toward realizing its objective. Better guidance is needed for environmental analysis of country programs, as well as for projects not subject to the *Canadian Environmental Assessment Act*.

2.92 The extent to which the projects we examined were designed and carried out in an environmentally responsible and sustainable manner varied. The environmental assessment processes and documentation we reviewed do not provide assurance that the projects were designed in an environmentally responsible manner. However, during our audit we encountered dedicated field personnel applying their expertise to ensure that projects were delivered in an environmentally responsible way.

2.93 In the projects we examined, CIDA has put in place foundations to achieve long-term sustainability. The Agency now needs to undertake long-term monitoring to determine if its projects are indeed sustainable.

About the Audit

Objectives

The audit objective was to determine to what extent CIDA is meeting and measuring its environmental and sustainable development commitments through its policies, programs, and projects in developing countries. We looked at whether

- CIDA management had set measurable, specific, and consistent direction for its international water commitments and environmental and sustainable development commitments;
- country programming reflected both the needs of developing countries and CIDA's direction for water resource management and environmental requirements; and
- selected water-related projects were carried out in an environmentally responsible and sustainable manner.

Scope and approach

We followed three lines of enquiry, matching the above-noted objectives:

- setting direction;
- selecting and designing projects; and
- delivering projects and measuring results.

From an extensive list of international commitments that CIDA identified as its responsibility, we selected those in the following agreements to audit:

- Agenda 21;
- the Convention to Combat Desertification;
- the Millennium Development Goals; and
- the World Summit on Sustainable Development.

From the numerous internal policies and strategies, we selected the following for audit:

- the Policy for Environmental Sustainability; and
- CIDA's sustainable development strategies.

Our work concentrated on country-to-country programming and projects. CIDA's funding and activities in support of multilateral organizations and countries in transition were excluded from this audit.

We audited nine water-related projects, three in each of Ghana, Honduras, and Indonesia. The countries and projects were selected in close consultation with CIDA to ensure that findings would be relevant and useful for drawing valid conclusions with a potential future impact.

In each country, we interviewed CIDA staff, country officials at all levels of government, other aid agencies active in the country, delivery agencies for CIDA projects, non-governmental organizations with environmental mandates, and, most important, those directly influenced by the CIDA projects—the local communities and individuals. In all, we conducted over 150 interviews. At CIDA headquarters, our work focussed on reviews of files and interviews with policy officers, environment and water specialists, country desk officers, and management.

Some quantitative information in this chapter is based on data drawn from various sources indicated in the text. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data have not been audited, unless otherwise indicated in the chapter.

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Appendix Selected international environmental agreements signed by Canada

Agenda 21 (1992). This instrument promotes sustainable development and requires a substantial flow of new and additional financial resources to developing countries. Agenda 21 includes a chapter on the protection and management of water. The chapter is based on a need to respond to the importance of managing water resources in an integrated manner and, at the same time, address issues of water scarcity. The chapter proposes the following seven areas of fresh water programming:

- integrated water resources development and management;
- water resources assessment;
- protection of water resources, water quality, and aquatic ecosystems;
- drinking water supply and sanitation;
- water and sustainable urban development;
- water for sustainable food production and rural development; and
- impacts of climate change on water resources.

Convention to Combat Desertification (1994). This is a convention aimed at assisting countries that suffer from the effects of desertification. The Convention confers obligations on developed countries to actively support the efforts of developing countries affected by desertification, through actions that include improving the management of water resources. Desertification refers to the deterioration of drylands into a desert-like zone. Effective management of scarce water resources is integral to the desertification convention. The impacts of desertification include a reduction in the world's freshwater reserves due to declining river flow rates and groundwater levels. Lack of fresh water can decrease the water available for cooking and cleaning and for farming. This in turn affects basic human needs and can jeopardize economic development.

Millennium Development Goals (2000). This agreement sets out eight goals supported by quantitative targets and indicators and established by the international community to significantly reduce poverty and achieve sustainable development. Goal 7 on environmental sustainability includes target 10, which aims to "halve by 2015 the proportion of people without sustainable access to safe drinking water." The eight goals are the following:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

World Summit on Sustainable Development (2002). The Summit in Johannesburg, South Africa, was the most significant global event of its kind since the 1992 UN Rio Conference on Environment and Development (UNCED). Its purpose was to review progress in implementing the outcomes of UNCED and to reinvigorate global commitment to sustainable development. The Summit produced a comprehensive Plan of Implementation. The key goals of this plan included improving living conditions of those living in poverty; addressing environmental deterioration by changing production, consumption, and the management and use of natural areas; and reforming and improving institutions and governance for sustainable development. Equally important, the plan reaffirmed Agenda 21 and target 10 of the Millennium Development Goals concerning access to safe drinking water, and added to the plan access to basic sanitation. The plan deals with a broad range of topics including water, oceans, energy, forests, biodiversity, and governance.

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2004

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Chapter 3

Sustainable Development Strategies: Using the Tax System and Managing Office Solid Waste

Office of the Auditor General of Canada

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Sustainable Development Strategies: Using the Tax System and Managing Office Solid Waste

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The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters, and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

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Chapter

3

Sustainable Development Strategies

Using the Tax System and Managing Office Solid Waste

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

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Sustainable Development Strategies
Using the Tax System and Managing Office Solid Waste

Main Points

3.1 The federal departments and agencies we audited need to do more to meet their sustainable development commitments in two key areas: examining ways to use the tax system to better integrate the economy and the environment, and managing solid waste generated by federal offices.

3.2 **Using the tax system.** Finance Canada has analyzed a range of issues associated with its tax-related commitments. However, it has not clearly stated what it is trying to achieve with these commitments, in terms of the performance that is targeted or is expected to occur. Its approach to implementing these commitments has been piecemeal and fragmented, because key steps such as pinpointing the main areas that need analysis are missing. Consequently, it is not in a position to tell Parliament and Canadians the extent to which it has analyzed how the tax system impedes or favours the attainment of sustainable development.

3.3 A systematic review, based on risk, of key opportunities for using the tax system to better integrate the economy and the environment is an important step toward using the tax system as a tool for sustainable development.

3.4 **Managing office solid waste.** The six departments and agencies we examined made specific commitments to manage office waste in their 2001 sustainable development strategies. We found that all the offices we visited were recycling; however, the departments cannot demonstrate that they are meeting all of their commitments.

3.5 Waste management initiatives in departments are products more of provincial legislation, municipal programs, and the commitment of individuals, than of direction from the federal government. Due to a lack of reliable measurements and inconsistent feedback to building occupants on their waste management performance, departments and agencies are not likely achieving the level of performance that is possible. This is not the model of excellence the government desires.

3.6 In 1990 the federal government set a target to reduce its waste by 50 percent by 2000. No government-wide measurement strategy was implemented and responsibilities were not assigned. Today, the government does not know if it met its target. Central leadership is needed to set government-wide priorities and develop guidance, tools, and practices for managing solid waste within the context of greening government operations.

Background and other observations

3.7 The Commissioner of the Environment and Sustainable Development monitors and reports to Parliament on the progress of federal departments and agencies in implementing their sustainable development strategies.

3.8 **Using the tax system**. The tax system, by influencing the actions of Canadians, can have important direct and indirect impacts on the environment and sustainable development. As the department responsible for analysis and advice on the structure of the tax system, Finance Canada has the opportunity to influence sustainable development in Canada by better integrating the economy and the environment. In its *2001–2003 Sustainable Development Strategy*, the Department made three tax-related commitments for that purpose.

3.9 As part of the 2002 World Summit on Sustainable Development Plan of Implementation, the Government of Canada along with other countries agreed to pursue certain commitments to address environmental issues, while recognizing that the tax system can affect the environment.

Finance Canada has responded. The Department's responses to our recommendations are included in this chapter. The Department does not commit to any actions beyond those already in place or previously planned. These actions were already taken into account in our conclusion and recommendations. Consequently, the Department does not appear to accept our recommendations.

3.10 **Managing office solid waste.** As the largest single enterprise in Canada, the biggest landlord, and the largest owner of office property, the federal government generates significant amounts of waste, including recyclable materials such as paper, cardboard, metal, and glass. We audited the Canada Customs and Revenue Agency (now the Canada Revenue Agency and the Canadian Border Services Agency), Department of Justice, Environment Canada, Natural Resources Canada, Public Works and Government Services Canada, and Veterans Affairs Canada.

The Government of Canada has responded. The Government of Canada's responses to our recommendations are included in this chapter. The government has indicated the actions it is taking or planning to take to address our recommendations. However, it has not clarified whether and how it plans to address the specifics of our recommendations. For example, the government does not address the renewal of its targets on waste management.

Introduction

Reporting on sustainable development progress

3.11 Federal departments and agencies set out a series of commitments in their sustainable development strategies, which they are required to prepare and update every three years. The first strategies were tabled in Parliament in December 1997, the second round in February 2001, and the third round in February 2004. The Commissioner of the Environment and Sustainable Development monitors and reports on the federal government's progress toward sustainable development, including the implementation of sustainable development strategies.

Focus of the audit

3.12 We assessed the progress of seven departments and agencies toward commitments made in their 2001 sustainable development strategies. We looked specifically at

- how Finance Canada examines ways to use the tax system to better integrate the economy and the environment; and
- how the Canada Customs and Revenue Agency, the Department of Justice, Environment Canada, Natural Resources Canada, Public Works and Government Services Canada, and Veterans Affairs Canada manage office solid waste.

3.13 The chapter looks at the progress the government has made toward sustainable development in two areas that are at opposite ends of the environmental and sustainable development spectrum: the tax system, which is policy based; and managing office waste, which is operational based.

3.14 **Using the tax system.** We focussed on three commitments made by Finance Canada in the context of its sustainable development objective to examine ways to use the tax system to better integrate the economy and the environment.

3.15 **Managing office waste.** We focussed on specific sustainable development commitments made by six departments and agencies on managing office waste.

3.16 For more information on the objective, scope, approach, and criteria, see **About the Audit** at the end of the chapter.

Using the Tax System

Finance Canada's role in influencing sustainable development

3.17 Integrating economic and environmental goals is fundamental to ensuring the prosperity of Canadians and safeguarding Canada's natural heritage for future generations. As a policy-oriented department, Finance Canada has limited direct involvement in delivering programs or services to

Canadians. However, as the lead department responsible for the Budget, the federal tax system, and designing tax policies, it has the opportunity to influence sustainable development in Canada.

3.18 Finance Canada officials provide analysis and advice on the structure of the tax system, including its potential to better integrate the economy and the environment. They have an important part to play in providing information for decision making on tax issues that may impede or favour the attainment of sustainable development. It is the Minister of Finance and cabinet who make the decisions, taking into consideration the analysis and advice received and other factors.

3.19 The tax system raises revenues, which now exceed $156 billion annually, and enables the government to achieve a variety of economic, social, and environmental objectives. Sometimes there are trade-offs among these objectives; the federal government needs to make informed choices in determining the most appropriate tax policy.

Did you know?

- The total amount of federal tax revenues for the year ended 31 March 2003: **$156.4 billion**
- The amount of that total that came from
  - personal income tax: **$89.5 billion**
  - corporate income tax: **$22.2 billion**
  - the goods and services tax (GST): **$28.3 billion**
  - energy taxes: **$5.0 billion**
  - other sources: **$11.4 billion**

Source: Public Accounts of Canada 2003

3.20 The tax system can exert great influence on the behaviour and decisions of Canadians. For example

- the tax deduction for Registered Retirement Savings Plans (RRSPs) has encouraged Canadians to invest billions of dollars each year for their future; and
- tobacco taxes may discourage Canadians from smoking, which in turn would reduce adverse health impacts.

3.21 The tax system can have an important influence on the environment directly or indirectly, by

- encouraging environmentally positive activities (through, for example, tax credits or deductions for donations of ecologically sensitive land); and
- discouraging environmentally negative activities.

3.22 The federal government has looked at using the tax system to achieve its environmental and sustainable development objectives for over a decade (Exhibit 3.1). Finance Canada in its *2001–2003 Sustainable Development Strategy* made three commitments to examine ways to better integrate the economy and the environment through targeted use of the tax system (Exhibit 3.2).

3.23 The Tax Policy Branch of Finance Canada is responsible for these three commitments and for developing and evaluating tax policies and legislation. The Canada Revenue Agency is responsible for collecting taxes and administering tax law.

3.24 Finance Canada sees its sustainable development strategy as one of its main plans and strategies, in addition to the Budget and its report on plans and priorities. One of the strategy's fundamental goals is to more fully integrate economic, social, and environmental considerations and objectives into policy making. In its strategy, the Department clearly ties this goal to its work on the tax system.

Exhibit 3.1 **Key federal statements and studies that refer to using the tax system for environmental and sustainable development objectives since 1990**

1990

Canada's Green Plan for a Healthy Environment. The government established a target to balance "use of strong and effective environmental laws with market-based approaches for environmental protection." This included using economic instruments such as tradeable emission permits and product and effluent taxes.

1992

Economic Instruments for Environmental Protection: Discussion Paper. The paper, issued as part of a Green Plan commitment, provided stakeholders with design and implementation considerations for using economic instruments and possible options for addressing them.

1994

Report of the Task Force on Economic Instruments and Disincentives to Sound Environmental Practices. The task force, an initiative from the 1994 Budget, developed a framework to review government policies that were barriers to sound environmental practices.

1995

A Guide to Green Government. The guide recognized that all available policy tools need to be examined to determine a suitable mix for accomplishing the objectives of sustainable development. It identified, among other things, tax instruments such as charges and incentives.

The Budget. The Budget committed to review the income tax treatment of investments in energy efficiency and renewable and non-renewable energy. This resulted in a Finance Canada and Natural Resources Canada study, The Level Playing Field: The Tax Treatment of Competing Energy Investments, which was released in September 1996.

1996

Discussion Paper on Federal Income Tax Treatment of Virgin and Recycled Materials. The paper described the federal corporate income tax treatment of metal mining and recycling, paper production using virgin and recycled fibres, and production of plastics using virgin and recycled resins.

1997

Finance Canada's *Sustainable Development Strategy*. In its strategy, the Department indicated that it planned to continue examining ways of improving the tax system to make it more compatible with Canada's economic, social, and environmental objectives.

2001

Catalogue of Federal, Provincial and Territorial Taxes on Energy Consumption and Transportation in Canada. The catalogue was published in May 2001 to fulfil a commitment in Finance Canada's 1997 *Sustainable Development Strategy*.

Finance Canada's Working Paper on Oil Sands Tax Expenditures. The paper measures the cost of federal corporate income tax incentives to develop and exploit Canada's oil sands.

Exhibit 3.1 Key federal statements and studies that refer to using the tax system for environmental and sustainable development objectives since 1990

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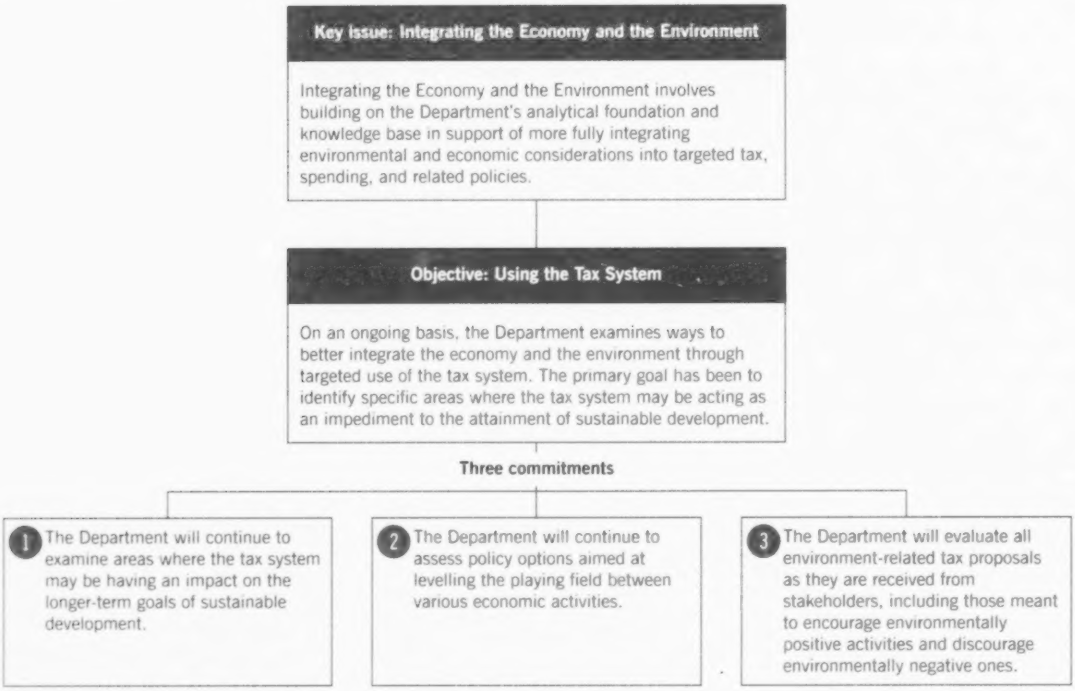
Exhibit 3.2 **Finance Canada's three commitments to examine ways to better integrate the economy and the environment by using the tax system**



Key issue: Integrating the Economy and the Environment

Integrating the Economy and the Environment involves building on the Department's analytical foundation and knowledge base in support of more fully integrating environmental and economic considerations into targeted tax, spending, and related policies.

Objective: Using the Tax System

On an ongoing basis, the Department examines ways to better integrate the economy and the environment through targeted use of the tax system. The primary goal has been to identify specific areas where the tax system may be acting as an impediment to the attainment of sustainable development.

Three commitments

1. The Department will continue to examine areas where the tax system may be having an impact on the longer-term goals of sustainable development.
2. The Department will continue to assess policy options aimed at levelling the playing field between various economic activities.
3. The Department will evaluate all environment-related tax proposals as they are received from stakeholders, including those meant to encourage environmentally positive activities and discourage environmentally negative ones.

Source: Adapted from *2001-2003 Sustainable Development Strategy*, Finance Canada

3.25 Various ways to enhance the use of the tax system for sustainable development have emerged, such as ecological fiscal reform or "green" budgeting (see A primer on ecological fiscal reform on page 7). Finance Canada officials told us that the government has not officially endorsed ecological fiscal reform as a guiding principle, though it has implemented a variety of measures that are consistent with this approach.

3.26 As part of the 2002 World Summit on Sustainable Development Plan of Implementation, the Government of Canada and other countries agreed to pursue certain commitments such as

- Encouraging the consideration of sustainable development in decision making by continuing "to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interest and without distorting international trade and investment."
- Recognizing that "policies to reduce market distortions would promote energy systems compatible with sustainable development through the use of improved market signals and by removing market distortions, including restructuring taxation and phasing out harmful subsidies, where they exist, to reflect their environmental impacts."

A primer on ecological fiscal reform

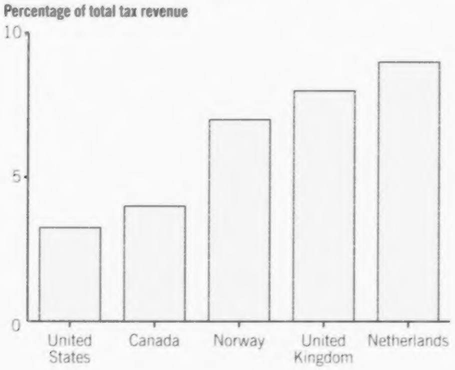
An important area in environmental policy is exploring economic incentives to achieve sustainable development. This includes using economic signals to reward environmentally responsible actions and discourage those that are contrary to sustainable development. It is one way some governments have tried to implement the "polluter pays" principle, since market prices often only reflect economic costs and not harm to the environment. This has come to be known as ecological fiscal reform (EFR) or "green" budgeting.

EFR uses policy tools such as taxation (tax exemptions, credits, and rebates), tradeable emission permits, direct spending, and program expenditure to "green" the way people buy, sell, and invest in the economy. An example is the federal government's decision to exempt from the federal excise tax alternative fuels such as ethanol produced from renewable sources.

EFR can also include ecological tax reform—adjusting taxes to make them sensitive to environmental impacts or imposing new taxes as an incentive to reduce environmental impacts. The revenue from the new tax could be recycled to fund, for example, reductions in existing taxes.

Over the past decade, several countries from the Organisation for Economic Co-operation and Development (OECD) have expanded the use of such tools to address environmental issues. The OECD has reported that Canada uses them less than most other OECD countries to achieve its sustainable development goals.

In 2001 Canada generated less tax revenues from environmentally-related taxes than most other OECD countries

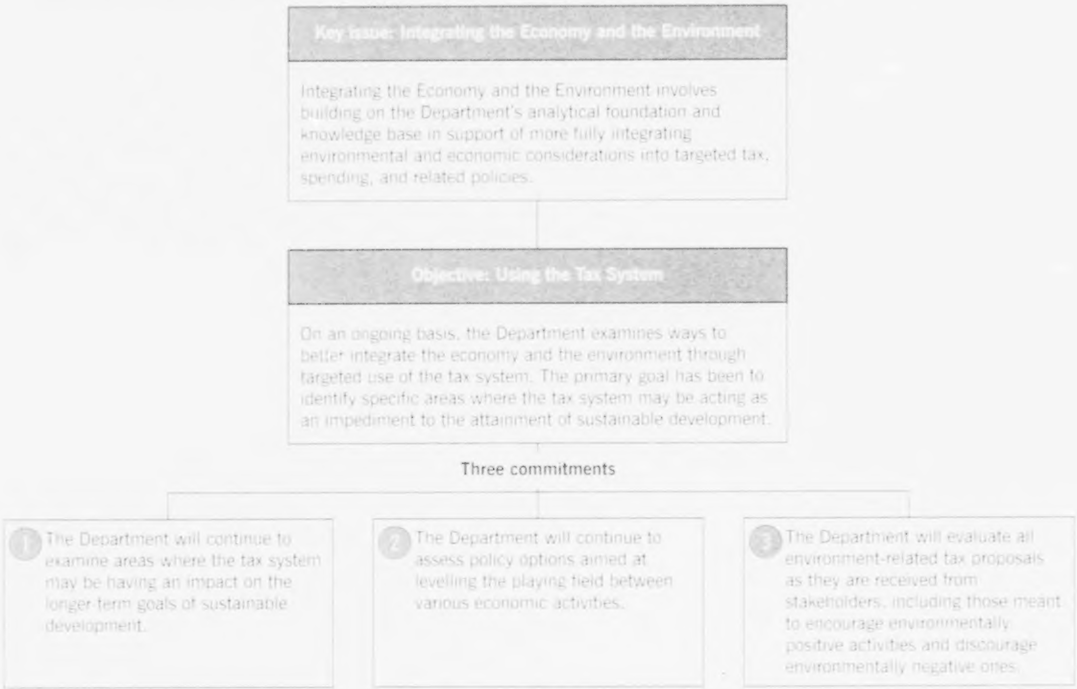


The majority of environmental tax revenues in OECD countries comes from motor fuels and vehicles. However, most of the countries reduce the effectiveness of their environmental taxes by giving significant exemptions to polluting and energy-intensive industries.

The National Round Table on the Environment and the Economy, an independent advisory body reporting to the Prime Minister, began a study on EFR in June 2000. Finance Canada is an observer to this process. The study explored the key challenges and opportunities of EFR and its potential in Canada. The national round table published the first phase of its study in June 2002. It defines EFR as a strategy that redirects a government's taxation and expenditure programs to create an integrated set of incentives to support the shift to sustainable development. Although Finance Canada has not defined EFR, Environment Canada defines it as changing the way governments tax and spend to create incentives for sustainable development.

The national round table suggests that EFR options be evaluated along with other measures, including regulatory and voluntary instruments, when addressing an issue. However, it notes that the final policy package may or may not include EFR tools.

Finance Canada's three commitments to examine ways to better integrate the economy and the environment by using the tax system



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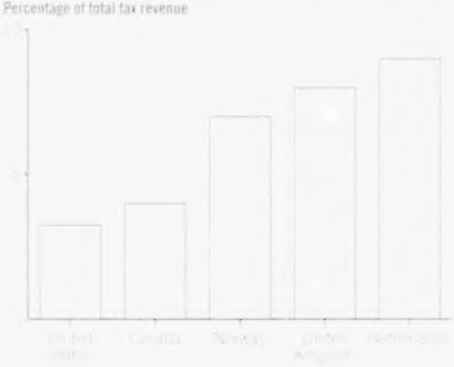

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The national round table suggests that EFR options be evaluated along with other measures, including regulatory and voluntary instruments, when addressing an issue. However, it notes that the final policy package may or may not include EFR tools.

The tax policy environment

3.27 Finance Canada officials informed us that they establish analytic priorities for tax measures on the environment, as with tax measures generally, based on numerous factors that affect the policy environment. Important factors in how the Department allocates its limited analytic resources are

- the government's overall policy direction on economic, social, and environmental issues, and
- the interest of parliamentarians, taxpayers, non-governmental organizations, and other departments in particular issues.

3.28 Without a policy statement from the government on the extent to which the tax system is to be used to integrate the economy and the environment, Finance Canada officials rely on various sources for direction, such as

- the Speech from the Throne, federal budgets, and the Climate Change Plan for Canada;
- the goals of programs approved by Cabinet and Parliament, such as a policy to develop renewable energy sources;
- government responses to parliamentary committees; and
- the Minister of Finance.

Observations and recommendations

The Department has examined a range of issues associated with its commitments

3.29 Consistent with its role in influencing sustainable development, Finance Canada's three tax-related commitments in its *2001–2003 Sustainable Development Strategy* (Exhibit 3.2) focus on analysis and use the words "examine, assess, and evaluate" to describe what the Department intends to do.

3.30 The process of analysis of the tax system is an ongoing one. For the period covered by its strategy, Finance Canada analyzed a number of issues associated with its three commitments. The analysis covered certain existing tax provisions with environmental consequences and potential new measures to further environmental objectives.

3.31 A number of factors influence which tax proposals are accepted by ministers. Progress against these commitments is represented by the analysis and advice provided by the Department rather than by the tax measures approved by the government and Parliament. Exhibit 3.3 provides examples of tax measures introduced, as well as other issues examined that the Department identified.

Finance Canada needs to describe more clearly what it is trying to achieve with its three commitments

3.32 In examining its three commitments, we set out to determine if the Department was doing what it said it would do. We expected the Department to have established clear performance expectations for these commitments to

Exhibit 3.3 **Examples of tax measures introduced and other issues examined, 2001-04**

Finance Canada analyzed a range of measures introduced, including

- Extending the intergenerational tax-deferred rollover (for example, from parent to child) for farm property to transfers of commercial woodlots, which are farming businesses and operated according to a prescribed forest management plan (Budget 2001).
- Expanding the range of renewable energy and energy efficiency equipment eligible for accelerated tax depreciation (Class 43.1) to include additional small hydro facilities and "blast furnace gas" (Budget 2001).
- Allowing more than one test wind turbine in a wind farm to qualify for flow-through share financing (2002).
- Extending the "look-back" rule for eligible expenses in energy efficiency and renewable energy projects financed using flow-through shares (2002).
- Expanding Class 43.1 to include certain stationary fuel cells, equipment used to produce bio-oil, and certain renewable energy equipment used in greenhouse operations (Budget 2003).
- Exempting bio-diesel fuel and the bio-diesel, ethanol, or methanol component of blended diesel fuel from federal excise tax on diesel fuel (Budget 2003).
- Eliminating the deductibility of fines and penalties imposed by law, including those under environmental protection laws (Budget 2004).

The Department also examined other issues, including

- Incentives for wind power production.
- Projections of tax expenditures associated with new investments in oil sands projects.
- Tax treatment of a possible domestic emissions trading system.
- Tax relief for employer-provided transit passes.
- Operation of the ecological gifts program (contribution to a review by Environment Canada).
- Tax credit for energy efficient vehicles.
- Tax on toxic substances.
- Catalogue of federal, provincial, and territorial taxes on energy and transportation.

ensure transparency and accountability. Achievements could then be compared against the stated expectations to allow an assessment of performance. It is important for the Department, as well as Parliament, to know what these commitments have achieved over time with the available resources.

3.33 We found that Finance Canada's three commitments were not expressed in clear and concrete terms: they are vague and open to interpretation, and they do not describe the performance that is targeted or is expected to occur.

3.34 **Key steps for implementing the commitments not identified.** We found that the Department did not identify the key steps for implementing its commitments. Instead, its approach to implementing them has been piecemeal and fragmented. The Department has stated that its primary goal is to "identify specific areas where the tax system may be acting as an impediment to the attainment of sustainable development" (Exhibit 3.2). Given its current approach, it is not clear how the Department intends to achieve this goal.

3.35 In our view, to accomplish this goal for the first two commitments, the Department needs to assess, using its knowledge and best judgment, where the tax system most likely impedes the attainment of sustainable development. Such an assessment is critical; it would allow the Department to focus its analysis on the key areas of concern or risk. Once these areas are identified, the Department would need to rank them based on its assessment of opportunities to integrate environmental and economic considerations. Given the tax policy environment in which the Department operates, the amount of time and resources available to undertake discretionary analysis may be limited. Thus, ranking would serve to guide the Department in selecting its areas for discretionary analysis. Such a systematic approach would enable the Department to establish clear and concrete performance expectations for the first two commitments. Without such expectations, the Department only has a list of measures analyzed, and it is not in a position to tell Parliament and Canadians the extent to which it has analyzed how the tax system impedes the attainment of sustainable development.

3.36 Departmental officials told us that they have a good understanding of how aspects of the tax system can affect relative prices and thereby influence economic decisions that may impact environmental objectives. This understanding helps inform the determination of priorities for analysis, though this is not documented comprehensively. It is therefore unclear how and why the issues analyzed were chosen.

3.37 The third commitment is, to some degree, more reactive in nature. Tax proposals from stakeholders that affect the environment may, however, be linked to another commitment or to a government priority. They can also be repetitive in nature, which affects how much analysis each needs. If a proposal had been examined, further analysis may not be needed; if it was new, the environmental, economic, and social benefits needed to be considered.

3.38 Finance Canada listed some of the factors used to determine the extent of analysis on various issues. It views stakeholders as an important source of information and feedback concerning the operation of the existing tax system. It states that stakeholder information complements its internal sources of information and helps it to take into account current developments and concerns in its analytical work.

3.39 **An approach to systematically assessing the tax system.** In its 1995 report, *Keeping a Promise: Towards a Sustainable Budget*, the House of Commons Standing Committee on Environment and Sustainable Development made recommendations on how to proceed with a baseline study of federal taxes, grants, and subsidies to identify possible barriers and disincentives to sound environmental practices. The federal government's

July 1996 response outlined a phased approach for identifying priority areas. It indicated that the initial work should focus on measures that, among other things,

- have a large impact on the environment,
- target a major sector, or
- involve significant government resources.

It also outlined a two-stage process that would be used once priority areas for this review had been determined:

- identify barriers and disincentives to sound environmental practices, and
- identify options to address the barriers and disincentives that have been identified.

Given the size and complexity of the tax system and the resources available, in our view, such a systematic approach to assessing the impact of the tax system on sustainable development is a way to fulfil the Department's commitments. This approach was not applied in a comprehensive manner. The government did, however, undertake some work linked to this response, such as producing a 1996 *Discussion Paper on Federal Income Tax Treatment of Virgin and Recycled Materials*.

3.40 **A descriptive framework of the Department's assessment process is being developed.** In its *2004–2006 Sustainable Development Strategy* released in February 2004, the Department states that it will develop and make public "a framework setting out the general parameters and criteria that guide the Department in the assessment of proposals to use the tax system to achieve sustainable development objectives." The framework will focus on criteria used by the Department to assess potential tax measures, regardless of whether the measure comes from the Department or stakeholders. We encourage the Department to develop this framework as soon as possible; it could help to clarify for Parliament and Canadians how the Department examines ways to use the tax system to achieve sustainable development objectives.

3.41 **Finance Canada's commitment in its 2004–2006 strategy is no clearer.** The 2004–2006 strategy commits to continue to evaluate research on environmental tax measures and to assess the potential of proposals received from stakeholders. Although not clearly stated, the departmental officials told us that the new commitment "maintains the essence of the previous commitments" but does not necessarily involve the same tasks.

3.42 While integrating the economy and the environment continues to be one of the Department's key issues for furthering sustainable development, this strategy, unlike the previous two strategies, no longer includes the explicit objective of "Using the Tax System."

3.43 It is not clear how the Department plans to continue to examine ways to integrate the economy and the environment through targeted use of the tax system. While the 2004–2006 strategy states that the Department is working to integrate the economy and the environment, its departmental mandate and mission statements refer to economic and social objectives but not to the environment. The Department has, however, indicated that the environment is often included for purposes of general discussion under the heading of economic and social objectives.

3.44 **Recommendation.** To demonstrate that it intends to maintain the essence of its three *2001–2003 Sustainable Development Strategy* commitments on examining ways to use the tax system, Finance Canada should

- develop clear and concrete expectations for their implementation;
- articulate the key steps for implementation;
- identify key areas where the tax system hinders the integration of the economy and the environment through a systematic review, based on risk; and
- inform Parliament and Canadians about its expectations, its key steps for implementation, and the results of its review.

Finance Canada's response. The Department provides analysis and advice on policies, particularly economic policies, that support Canada's economic and social goals, including the environment. In keeping with this role, the Department made commitments in its *2001–03 Sustainable Development Strategy* to examine certain areas of the tax system and policy options, and evaluate all environment-related tax proposals received from stakeholders. These commitments have been fulfilled. The Department has undertaken analysis of a wide range of aspects of the tax system that may affect the interaction of the economy and the environment, and this analysis has informed decision making by the government in respect of tax and environmental policies.

Going forward, the Department has committed in target 2a.5 of its *2004–06 Sustainable Development Strategy* to "continue to evaluate research concerning environment-related tax measures" and to "assess the potential of proposals received from stakeholders for using the tax system to assist the Government in meeting its environmental objectives." These commitments describe how the Department's analysis integrates sustainable development considerations. The Department will continue to develop analysis as it has done in the past to meet its commitments.

Resources will be focussed on evaluating research concerning environmental related tax measures and assessing the potential of proposals received to assist in meeting environmental objectives, where such measures and proposals are judged to hold the greatest potential to help the government achieve its objectives. The Department will continue to report in its departmental performance report on the range of activities undertaken, subject to the confidentiality concerns referenced in the Department's response to recommendation 3.60.

Consideration of environmental impacts could be improved

3.45 We found in some cases, that Finance Canada could have given greater consideration in its analysis to the environmental impacts of proposed tax measures. While we do not question the decisions taken by the federal government in these cases, we do note that informed decision making requires that environmental impacts be properly understood, recognizing that decision makers take into consideration other factors as well. The analysis is an important means to identify existing or proposed mitigative measures at the government's disposal to address potential environmental impacts. Such an analysis is required by the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (see Chapter 4 of this Report).

3.46 In the 2004 Budget, the government announced a tax measure to increase the rate per year that companies can depreciate computer equipment for tax purposes by 50 percent (from 30 to 45 percent per year) to better reflect the useful life of the assets. Under the Cabinet Directive, the Department completed an initial screening of the environmental impact of the increase and concluded that it would likely not have any important (positive or negative) environmental effects. The assessment did not refer to any specific environmental impacts associated with computers, such as those related to toxic substances (lead, cadmium, and mercury), which can pose a risk to human health and the environment if they are not properly disposed. Departmental officials told us that they considered these issues, but they could not provide us with supporting documentation. A more comprehensive analysis would have documented the environmental impacts, including whether the impact of a 50 percent increase in the depreciation rate could lead companies to acquire or dispose of computers more quickly. To address these impacts, it could also have identified existing or proposed mitigative measures at its disposal or that of other departments.

3.47 Another case where the Department could have analyzed more fully the environmental impacts is Bill C-48: An Act to amend the *Income Tax Act* (Natural Resources) (Exhibit 3.4).

3.48 The fact that the Department did not consider these two measures under the umbrella of its tax-related sustainable development commitments is revealing. In both cases, the driver behind the tax measure was economic as opposed to environmental. Given the nature of the commitments, we expected the Department to adequately analyze the potential environmental impacts of every tax measure under consideration.

3.49 **Is the Department's capacity for environmental analysis appropriate?** To conduct environmental research and analysis on tax measures, the Department needs to have appropriate environmental expertise at the analyst level and at more senior levels.

3.50 The Department has not formally assessed its needs for environmental expertise to determine whether its current capacity is adequate. However, it has outlined initiatives for training and building awareness on the

Exhibit 3.4 **Bill C-48: Environmental impacts could have been analyzed more fully**

The government announced in its 2003 Budget that it would reduce the corporate income tax rate from 28 to 21 percent over a five-year period for the resource sector and would improve its tax structure by removing some preferential treatment. The 2000 Budget reduced the corporate tax rates for all other sectors not already eligible for special tax treatment. In June 2003, the government introduced *Bill C-48: An Act to amend the Income Tax Act (Natural Resources)* in the House of Commons. Bill C-48 was given Royal Assent on 7 November 2003.

Finance Canada states that the reduction in the income tax rate for resource income would result in a marked improvement in Canada's competitiveness. However, the Department did not estimate the increased activity that could follow or the potential environmental effects. The resource industries covered by Bill C-48 are energy-intensive and affect the environment in various ways. For example, these industries release polluting substances and greenhouse gas emissions that have implications for climate change. In the absence of mitigating measures, an increase in activity would result in greater negative environmental impacts. At the same time, there may have been some positive environmental impacts with the removal of certain preferential treatment.

We found that Finance Canada did not conduct a strategic environmental assessment of the environmental implications, negative or positive, of the changes set out in Bill C-48. Such an analysis is required by Cabinet Directive.

environment—part of its strategic environmental assessment process (see Chapter 4 of this Report for more information on strategic environmental assessment). While training and awareness building on this process are good first steps, they alone may not enable Finance Canada officials to sufficiently consider the environmental implications of tax measures.

3.51 The Department relies on its officials to examine proposals at a very high level and determine whether other expert departments need to be involved. It can consult or request environmental analysis from other departments. However, if the Department lacks appropriate capacity for environmental analysis, it may not be able to provide decision makers with appropriate information on environmental impacts and their implications.

3.52 Is the Department's capacity for environmental analysis appropriate? It did not document an understanding of the environmental effects of some initiatives including, as noted in paragraphs 3.46 and 3.47, increasing the depreciation rate of computer equipment and of Bill C-48. In our view, the Department needs sufficient environmental capacity to

- analyze proposals,
- assess the analysis provided by other departments,
- integrate the environmental considerations with the economic and social considerations, and
- consider measures at the government's disposal to eliminate or reduce the negative environmental impacts of a proposed tax measure, where appropriate.

3.53 **Recommendation.** To facilitate informed decision making, Finance Canada should ensure that potential environmental impacts are adequately analyzed for all proposed tax measures and policy options, and integrated with economic and social impacts.

Finance Canada's response. The Department is committed to integrating environmental considerations into the analysis and advice it prepares to support decision making in accordance with the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals. In May 2003, the Department put in place an enhanced strategic environmental assessment process to ensure that advice to the minister on all proposals includes an assessment of potential environmental effects. All policy proposals submitted to the minister for decision are subject to an initial screening to determine whether they are likely to have important positive or negative environmental effects. If so, a strategic environmental assessment is conducted. The guidelines for implementing the Cabinet Directive indicate that departments conducting assessments are encouraged to seek the advice of environmental specialists in other expert federal departments where appropriate, which the Department will continue to do as it has done in the past.

Reporting progress against commitments needs to be improved

3.54 Finance Canada needs to improve how it monitors, assesses, and reports on progress in conducting analysis on the potential use of the tax system to better integrate the economy and the environment. Currently departmental reporting on progress against its commitments is limited.

3.55 Finance Canada includes a list of tax measures that have been implemented over a period of time in an annex to the Budget Plan, which is produced for each federal budget. Its performance reports also list some implemented measures. In the absence of stated performance expectations, this reporting does not provide sufficient information to allow an assessment of progress against the commitments. This, in turn, makes it difficult to obtain a clear picture of how the Department is doing on its primary goal associated with its three commitments (Exhibit 3.2).

3.56 **Recommendation.** Finance Canada should monitor, assess, and report progress on implementing its tax commitments against clearly established expectations.

Finance Canada's response. At the outset of each year, the Department reports on planned activities with respect to its sustainable development commitments in its report on plans and priorities. Following the end of each year, the Department reports on its activities in the departmental performance report, which includes a detailed supplementary document setting out activities undertaken in support of its sustainable development strategy commitments.

The Department's ability to report in greater detail about analysis planned or conducted with respect to specific tax changes is restricted by the confidentiality concerns referenced in the Department's response to recommendation 3.50.

3.57 We identified several options that could help Finance Canada improve its reporting. In our view, the Department could enhance transparency by making public the analysis of the anticipated environmental impacts of the tax measures included in the Budget. This could be reported in an annex to the budget or separately.

3.58 As well, in certain circumstances, it may be appropriate for Finance Canada to publicly disclose the analysis of tax measures that were examined but not implemented. For example, Finance Canada received a proposal from various stakeholders to allow employees to receive employer-provided transit passes as a tax-free benefit with the objective of increasing transit ridership. The measure was not implemented; the Department's analysis concluded that the proposal would not be cost-effective because the increase in ridership would be modest. The Department provided analytical information on this issue to the House of Commons Standing Committee on Finance in February 2002. This case illustrates that information on measures examined but not implemented can sometimes be made public.

3.59 These options would help Parliament and the public to hold the Department to account for the extent of progress on its commitments and the adequacy of the analysis undertaken. Public exposure also allows greater scrutiny, improves the quality of public debate, and ultimately improves the information. However, we recognize that increased transparency may not always be feasible in order to maintain budget secrecy for measures still under consideration.

3.60 **Recommendation.** To improve its reporting against its tax commitments, Finance Canada should consider publicly disclosing the analysis of the potential environmental impacts of

- tax measures that are implemented, and
- where feasible, tax measures examined but not implemented.

Finance Canada's response. The Department is committed to releasing a public statement of environmental effects in accordance with the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals when a detailed assessment of environmental effects has been conducted in respect of a new measure.

To further improve transparency, the Department has also committed to publicly issue a framework setting out the general parameters and criteria that guide the Department in assessing proposals from stakeholders to change existing tax measures or implement new tax measures to further sustainable development objectives. This document will make it easier for stakeholders to understand the Department's assessment process with respect to tax policy proposals in general.

The Department's ability to report on its analysis of specific tax measures or proposals in greater detail is constrained by the need to avoid influencing decision making by economic agents who may attempt to either take advantage, or avoid the impacts, of a possible future tax measure. Furthermore, the normal confidentiality of the policy development process must also be respected to ensure that ministers have the benefit of candid advice in their deliberations. Similar factors are also recognized in the established principles of Cabinet confidence and in the various discretionary exemptions available under the *Access to Information Act*.

Conclusion

3.61 For the period covered by its *2001–2003 Sustainable Development Strategy*, Finance Canada has analyzed a range of issues associated with its tax-related commitments. However, it has not clearly stated what it is trying to achieve with these commitments, in terms of the performance that is targeted or is expected to occur. Therefore, we are not able to assess the extent of progress it has made against its commitments.

3.62 The Department's approach to implementing these commitments has been piecemeal and fragmented, because key steps such as pinpointing the main areas that need analysis are missing. Consequently, it is not in a position to tell Parliament and Canadians the extent to which it has analyzed how the tax system impedes or favours the attainment of sustainable development.

3.63 Finance Canada needs to do more work to meet its tax commitments, including its primary goal of identifying specific areas where the tax system may be acting as an impediment to the attainment of sustainable development. A systematic review, based on risk, of key opportunities for using the tax system to better integrate the economy and the environment is an important step toward using the tax system as a tool for sustainable development.

Managing Office Solid Waste

Solid waste and the federal government

3.64 The federal government is the largest single enterprise in Canada. It employs more people than the largest Canadian private sector company. It is also the biggest landlord and the largest owner of office property. An organization of these dimensions generates large amounts of solid waste.

Did you know?

- The number of tonnes of waste generated by Canadians in 2002: **31 million**
- Percentage of that waste that was disposed of in landfills or incinerators: **79%**
- Revenues for Canadian waste management firms in 2002: **$4.1 billion**
- Number of people that are employed in the private and public sectors of the Canadian waste management industry in 2002: **32,400**
- The amount that the municipal sector spent on waste management in 2002: **$1.5 billion**

Source: Statistics Canada

3.65 Responsibility for managing waste in Canada is shared among municipal, provincial, territorial, and federal governments.

- Municipal governments collect and dispose of household waste and manage landfill sites and incinerators.
- Provincial and territorial governments develop waste management regulations and policies.
- The federal government supports the provinces and territories with research and public education initiatives and manages waste in its own operations.

The primer on waste management on page 18 provides more information on waste management.

3.66 Non-hazardous solid waste generated in federal offices is typically composed of paper, cardboard, metal, plastic, glass, and organics (Exhibit 3.5). In this chapter we will refer to this as office solid waste or office waste.

3.67 The government uses a variety of voluntary commitments, goals, guidelines, strategies, and targets to manage its solid waste. Many of its commitments appear in the sustainable development strategies.

A primer on waste management

When waste is not managed properly, its by-products can have serious effects on human health and the environment—they can enter the air we breathe and the water we drink. To avoid the economic and environmental costs of transportation, landfill sites must be located close to the people that generate waste; however, the cost of real estate near urban areas is high and people do not want landfills close to where they live. These issues underscore why effective waste management programs, practices, laws, and regulations are important for individuals, industry, local governments, provincial governments, and for the Canadian federal government.

A machine covers garbage at the Trail Road landfill site, City of Ottawa

Photo: Solid Waste Services, City of Ottawa

The 3Rs

There are many things that individuals, organizations, and manufacturers can do to minimize waste.

Reducing. The most desirable option is to reduce initial consumption and the amount of waste generated. Individuals and organizations can reduce by avoiding packaging and single-use products and purchasing reusable, repairable, rechargeable, or refillable products.

Reusing. The next best option is to reuse goods and materials.

Recycling. Recycling reprocesses an old or used product to make a new product.

Reducing consumption and reusing goods are preferable to recycling from an environmental standpoint and is embodied in the 3Rs: reduce, reuse, and recycle. The 4th R, recovery, takes useful materials from products that have been discarded.

The value of waste

Recognizing the valuable materials that are in waste has led to a new way of looking at waste management and involves taking lessons from nature. "Cradle to cradle" design emulates natural processes; it uses manufacturing methods to produce products whose biological and inorganic components can be used again and again for other useful goods.

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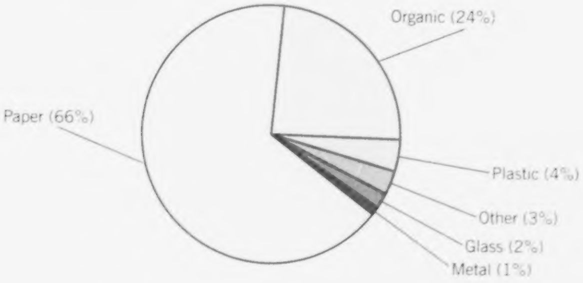
Exhibit 3.5 **Office solid waste in the federal government (by weight) 2000-03**

Data are based on total waste in nine federal waste audits from the six departments and agencies audited



Observations and recommendations

Has the government met its waste reduction target?

3.68 For more than a decade, the federal government has made strong commitments and set specific targets for waste reduction:

- **1989.** The Canadian Council of Ministers for the Environment (CCME) recommended a target of 50 percent reduction in waste generation by 2000.
- **1990.** The *Green Plan* committed the federal government to reducing waste from its own operations by 50 percent by 2000.
- **1995.** The *Guide to Green Government* called on departments to "move progressively toward pollution prevention" and "realize the Canadian Council of the Ministers of the Environment (CCME) target of 50 percent reduction by the year 2000, using 1988 as a base year."
- **1999.** In the Speech from the Throne, the federal government affirmed it would make itself a model of environmental excellence in its own operations.

3.69 Given the history of federal government solid waste management targets, the commitment to excellence in greening government operations, and the tangible nature of office solid waste management, we expected to find significant progress.

3.70 However, the government had no implementation plan to achieve its targets. There was confusion over whether the target covered waste diversion as well as waste reduction; there was no government-wide measurement strategy; and no accountabilities or responsibilities were identified. Accordingly, the government does not know if it met its target to reduce waste by 50 percent by 2000.

Waste reduction—Waste reduction at source reduces the amount of waste generated, collected, and managed.

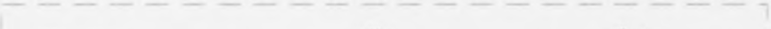
Waste diversion—Waste diversion redirects waste away from disposal by reusing, recycling, or recovering the waste. It does not include waste reduction.

3.71 **Most departments target waste diversion.** In a 2003 report, Environment Canada noted that "the primary challenge in Canada (for waste management) is to reduce the amount of solid waste generated. The secondary challenge is to increase the amount of waste diverted from landfill." Therefore, waste reduction as well as waste diversion, through recycling, are important. Our audit found that five of the six departments and agencies we examined made numerical commitments in their strategies to divert waste by recycling. Although some departments made commitments to reduce paper use, Natural Resources Canada is the only department that included an overall waste reduction target in its sustainable development strategy.

3.72 By emphasizing waste diversion targets, departments and agencies may not focus enough on source reduction initiatives such as "green" procurement. A comprehensive solid waste management program needs to include targets to address waste reduction and waste diversion. Exhibit 3.6 illustrates the difference between reduction and diversion.

3.73 Although most of the departments we audited are not targeting reduction in waste generation in their sustainable development strategies, they are all undertaking initiatives to reduce waste. For example, the Canada Customs and Revenue Agency has several initiatives to reduce paper including using electronic forms and publications. Similarly, the Department of Justice has implemented the Barrister's Briefcase Project, which helps government litigators manage documents electronically. In its 2004–2006 *Sustainable Development Strategy*, Veterans Affairs Canada notes that recycling

Exhibit 3.6 **Waste reduction versus waste diversion**



Diversion

Old forms and publications are recycled. Material is used but also diverted away from landfill.

Reduction

Forms and publications are available only on-line. Material is reduced by not being used.

has been an important part of its program to date but that the key to success lies in reduction.

Office waste is being recycled

3.74 During our audit, we visited buildings occupied by federal employees in seven cities and five provinces. Some buildings were owned by the federal government, and others were leased from the private sector; some were managed by Public Works and Government Services Canada (PWGSC) or their contractors, and others were managed by private owners. We found that office waste was being managed to some degree, primarily through recycling and disposal in all of the facilities we visited.

3.75 All the buildings we visited recycled paper and cardboard. Recycling plastics, glass, and metal and composting food and paper towels varied according to locally available recycling programs, provincial regulations, and individual commitment of federal employees and building management.

GREEN
AU VERT

A typical unit to sort recyclable material

3.76 In almost all locations, employees and building managers provided examples of how they were managing waste. Some examples include units to sort recyclable materials, composting initiatives, and signs for recycling bins.

Departments cannot demonstrate that they are meeting their commitments

3.77 Although most building occupants and managers believed they had made progress, departments and agencies could not provide us with reliable measurement results to demonstrate that these initiatives have improved office waste management. Departments and agencies could not demonstrate that they were meeting all of their sustainable development strategy commitments. Exhibit 3.7 looks at the strategy commitments made by the six departments and agencies and the performances reported by them.

3.78 All six departments and agencies we audited set reasonably clear and concrete numerical commitments for managing office waste. However, only the Canada Customs and Revenue Agency could demonstrate that it had met two of its three waste commitments. The other departments could not demonstrate that they had met their commitments.

Key reasons for the performance gap

3.79 **Incomplete implementation plans.** In order to achieve and measure progress against commitments, departments need to take the steps to turn their commitments into action. These steps could be called an implementation plan. For example, an organization would need to

- identify roles and responsibilities,
- ensure that appropriate infrastructure was in place,
- provide ongoing education and awareness programs,
- implement cost-effective ways to measure waste, and
- ensure regular feedback to building occupants.

Without an implementation plan, sustainable development strategy commitments exist only as words on paper and have little possibility of being achieved.

Exhibit 3.7 **Sustainable development strategy commitments and performance reported by six departments and agencies**

Strategy commitments	Performance reported	Our observations
Canada Customs and Revenue Agency		
Develop environmental management program for solid waste management. Divert an average of 50% solid waste from landfill in priority Agency-owned facilities. Divert an average of 70% solid waste from landfill in priority leased facilities.	The Agency developed an environmental management program for solid waste. For owned facilities, it diverted waste by 43%; for leased facilities, it diverted waste by 79%.	The Agency has a sampling method for measuring waste and monitoring commitments. It met two of its three commitments.
Department of Justice		
By 31 March 2004, divert from landfills 76% of total solid waste produced nationally.	The Department reported in its 2004–2006 strategy that it had partially achieved its commitment: • It cannot measure the amount of waste diverted at leased private sector sites. • It diverted 80% of its waste at headquarters.	The Department does not know its national diversion rate. The reported 80% diversion rate at headquarters included surplus crown assets, such as furniture, that are typically not considered waste.
Environment Canada		
Put in place Environment Canada's Environmental Management System action plan on solid waste management and commence annual reporting on progress toward targets, by 31 March 2002. By 31 March 2004, divert 70% of solid waste from landfill—that is, 70% by weight of all solid waste is to be recycled. (Adopted from SDGO guidance)	The Department changed its approach from department-wide to facility-based. The facility-based action plans are incomplete. The Department has not reported publicly on its progress toward the 70% target.	The Department is still developing its action plans and its department-wide measurement strategy. Internal data shows the Department has not met its commitment to divert 70% of waste.
Natural Resources Canada (NRCan)		
By 2003, maintain, expand and promote NRCan's waste-free program. The Performance Measurement Framework targets a 50% reduction in solid non-hazardous waste from the level measured in 1995-96 audits by 2000.	The Department reported some program maintenance, expansion, and promotion for the National Capital Region. The *2001–02 Performance Report* shows a 42% reduction in average waste generated per person per year.	The Department's promotion and expansion of its waste-free program is limited. The 42% reduction rate is unreliable based on problems identified with the data on which this percentage was based.

Exhibit 3.7 **Sustainable development strategy commitments and performance reported by six departments and agencies (Continued)**

Strategy commitments	Performance reported	Our observations
Public Works and Government Services Canada (PWGSC)		
By 31 March 2004, achieve and maintain a 60% diversion rate of office solid waste from landfill and incineration in all Crown-owned Real Property Service facilities, i.e., 60% by weight of all solid waste is to be recycled.	The Department reported in its *2002 Sustainable Development Performance Report* that it diverted 62% of waste.	During our audit, PWGSC re-examined its data and determined that it diverted 57% of its waste. However, this is not reliable based on problems identified with the data on which this percentage was based (see paragraph 3.82).
Veterans Affairs Canada		
Divert 5.6 % of solid waste from landfill per year until March 2004. **Note:** The original commitment (*1997 Sustainable Development Strategy*) was developed based on the Guide to Green Government's recommended 50% waste reduction between 1988 and 2000. Using 100 as the value for waste in 1988, it was calculated that a 5.6% reduction each year, from 1988 to 2000 would obtain a 50% waste reduction by 2000.	PWGSC's most recent waste audits for the two headquarters buildings in Charlottetown indicate that waste was diverted by 91% and 76%. Based on this information, the Department reports that it has exceeded its commitment.	The Department used the same commitment in all three of its sustainable development strategies; it is not able to measure performance department-wide.

3.80 We asked the departments and agencies to provide us with their implementation plans. Although none had taken all the steps to turn their commitments into action, some had introduced important elements:

- The Canada Customs and Revenue Agency developed a program to manage solid waste through its environmental management system.
- Environment Canada, PWGSC, and Veterans Affairs Canada are linking their commitments to their environmental management systems, which could eventually serve as implementation plans.
- Natural Resources Canada identified a list of next steps in its *2001–02 Performance Report* but did not develop detailed work plans to achieve its waste reduction target.

Environmental management system—An environmental management system includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining an environmental policy and elements of a sustainable development strategy.

3.81 **Missing or unreliable measurements.** Veterans Affairs Canada and the Department of Justice set specific targets for diverting waste but do not have a department-wide strategy to measure progress toward these targets.

3.82 PWGSC provides office accommodation and other facilities for over 187,000 public servants and parliamentarians. The Department uses CatchAll, a database to capture and report information on office waste at its 321 Crown-owned and operated facilities. We found CatchAll data to be unreliable in a number of ways:

- Data for entire facilities were missing from the National Office Waste Management Roll-Up Summary, which rolls up data supplied by CatchAll.
- Information input into CatchAll is inconsistent among buildings and regions. For example, recycled shredded paper and bottles and cans are captured for reporting in some buildings and in some regions, but not in others.
- Regional staff reported that CatchAll is difficult to use and information is not entered with attention to quality control in some locations.

3.83 Natural Resources Canada also has solid waste measurement procedures in place. However, the numbers reported by this department were also unreliable. Based on the obvious errors and inconsistencies we found in the data reported by PWGSC and Natural Resources Canada, it appears that no one reviewed the accuracy of the data prior to reporting it to departmental management, the public, or to Parliament.

3.84 Our audit found examples of cost-effective methods of measuring office waste management performance:

- The Canada Customs and Revenue Agency developed a sampling method that uses waste audits and questionnaires to obtain data for its owned and leased facilities.
- A company in Ottawa provides monthly reports for property managers and tenants and uses abbreviated waste audits and existing hauler reports to monitor and measure waste performance in large office buildings each year.

Waste audits—A waste audit includes a physical sort of waste and recyclables for a specific period of time and in specific parts of a building. It reports on the composition of the waste, and the waste diverted and potentially diverted from landfill.

Hauler reports—A hauler report provides information on the amount of material recycled and sent to landfill in weight or volume for a specific facility. The availability of haulage records depends on the contract that a property manager negotiates with its service providers and whether the terms of the contract are enforced. Haulage companies can provide records monthly, quarterly, yearly, or on request.

3.85 **Inconsistent feedback on performance.** Many of the building occupants we talked to were not satisfied with the feedback they received on their recycling performance. We found cases, in each of the organizations we audited, where waste information was not regularly provided to building occupants in a manner that would help them understand their performance and work to improve it. In some cases, the information was not available because waste audits had not been undertaken; in other cases, the property managers had the information but did not regularly provide it to building occupants.

3.86 Due to the lack of reliable measurements and the inconsistent feedback to building occupants on their performance, departments and agencies are not likely achieving the level of performance that is possible. If managers and building occupants do not know their level of performance and the reasons for it, performance is difficult to improve.

3.87 **Perceived roles and responsibilities are not clear.** During our audit, building occupants from the Canada Customs and Revenue Agency, Environment Canada, and Veterans Affairs Canada reported a need for more clarity about the roles and responsibilities involved in managing office waste.

In 1996, the *Department of Public Works and Government Services Act* confirmed PWGSC's responsibilities for Crown-owned office buildings and the management of related infrastructure on behalf of departments. Prior to this, Environment Canada and Veterans Affairs Canada report that they had a more direct role in managing solid waste. For example, they report that the current lack of direct control in buildings they occupy within PWGSC inventory contributes to problems in obtaining data on a consistent basis.

3.88 PWGSC and its tenant departments sign "occupancy instruments." These establish terms of occupancy and the cost of the accommodation and services provided. Leases are used to specify these terms where buildings are privately owned. Occupancy instruments and leases do not always specify who is responsible for managing waste activities such as providing recycling services and collecting and reporting data on waste. In the fall of 2003, PWGSC developed a "green" lease that is used as new leases are negotiated. Clause 11.1 of the green lease deals specifically with recycling and clarifies responsibilities for managing and measuring waste.

Problems at a higher level

3.89 Some of the issues identified in the six organizations examined are also reflected government-wide. For example, five of the six departments and agencies we audited cannot demonstrate that they are meeting their commitments to divert office waste, and the government cannot demonstrate that it met its target to reduce waste generated by 50 percent by 2000.

3.90 **No central leadership for waste management.** In the early 1990s, the Office of Waste Management housed within Environment Canada worked "with all departments to develop and co-ordinate federal waste management policies, programs and initiatives, and provide for informed decision making." It was dismantled between 1995 and 1997 as a result of program review. In the late 1990s, PWGSC became involved in recycling by providing the infrastructure required for tenants' recycling activities. PWGSC has no overall mandate to manage, measure, and report on solid waste for the whole federal government, nor does any other department or agency.

3.91 **Priorities are not clear.** All government operations generate office waste that must be managed in some way. Most of the departments and agencies that prepared a 2001 sustainable development strategy made commitments to manage solid waste in the context of greening their operations. However, the government-wide target of the 1990s is dated, and it is not clear if the 50 percent reduction remains a goal. The priority placed on waste management was not clear to departments and agencies we examined and was not clear to us in our audit.

3.92 **Sustainable Development in Government Operations is an important initiative.** Sustainable Development in Government Operations (SDGO) is an inter-departmental initiative chaired by Environment Canada, Natural Resources Canada, and Public Works and Government Services Canada. It provides departments and agencies with guidance on common performance measures and targets and reports on progress made in six areas of government operations including managing non-hazardous solid waste and "green" procurement. The 2003 SDGO report, *Greening the Federal House*, is a government-wide effort to measure progress toward greening of government operations and is a significant achievement toward this goal. However, SDGO does not have a system to verify the quality of the data it collects and reports. There are significant problems with the way departments measure and report data to the SDGO, and therefore the reliability of waste data reported by the SDGO is questionable.

3.93 The ability of the SDGO (now managed by the Sustainable Federal House in Order steering committee) to co-ordinate, consolidate, and educate departments and agencies in monitoring and reporting on greening initiatives such as office solid waste is promising. However, the SDGO can only encourage participation; departments and agencies contribute on a voluntary basis. The SDGO currently has no authority to ensure that the common performance measures are used or that data is gathered and reported correctly or comparatively.

Examples of best practices

Provincial legislation. The Waste Resource Management Regulations in Prince Edward Island require all businesses, residences, institutions, and industries to sort, recycle, and compost. A waste audit at Veterans Affairs Canada's headquarters in Charlottetown indicated that 91 percent of waste was being recycled, including paper, cardboard, glass, metals, and plastics.

Commitment of individuals. A key factor of successful office waste management is individual commitment. We noted that successful initiatives were supported by enthusiastic and committed federal employees and managers. For example, Environment Canada employees in Edmonton use a volunteer recycling system in the absence of municipal programs.

3.94 **Where is the model of excellence?** The federal government has stated that it wants to be a model of environmental excellence in its own operations. Yet it does not have the performance information to verify whether it has achieved its numerous commitments to manage solid waste. Furthermore, the waste management initiatives that are in place at the department level have more to do with provincial legislation, the presence or absence of municipal programs, and the commitment of individuals, than with direction from the federal government.

3.95 The example provided by the Quebec region of PWGSC shows what can be done (Exhibit 3.8). It took a strategic, comprehensive approach to managing office waste and demonstrated good results using sampling measurement methods.

3.96 **Problems identified in 2000 continue.** In 2000, the Commissioner's chapter, Greening of Government Operations—When Will the Government Measure Up?, made several recommendations to improve the federal government's performance in measuring the progress in greening government

Exhibit 3.8 **A federal recycling model that works**

In 1997 PWGSC launched its New and Improved Recycling Program in the Quebec region. The program now serves approximately 18,000 federal employees in over 30 federal departments and agencies located in over 50 buildings across 30 cities in Quebec. Materials that are recycled include paper, cardboard, metal, plastic, and glass.

The program is comprehensive and takes into consideration all aspects of waste management: materials, stakeholders, users, equipment, contracts, funding, and communications. It has a clear implementation plan, a strategic sampling method for measuring data, and reports a waste diversion rate of 67 percent.

The program serves as a model to Recyc-Quebec, a provincial Crown corporation that promotes, develops, and encourages reduction, reuse, recovery, and recycling.

operations, including waste management. Although very different in scope, the 2000 audit shares a number of common observations with this audit, including a lack of central leadership, the need for action plans, and gaps in data and measurement strategies.

3.97 Given the history of federal government commitments and targets for waste management, the uncertainty surrounding current priorities and goals, and the failure of five out of the six organizations to show they have met their strategy commitments, attention is required to get federal solid waste management back on track. Options could include one or more of the following:

- using the existing provisions of the *Canadian Environmental Protection Act* to develop regulations for federal solid waste management;
- designating an organization to manage, measure, and report on solid waste for the federal government; and
- strengthening existing mechanisms across departments such as the Sustainable Development in Government Operations initiative.

3.98 **Recommendation.** The Privy Council Office, as the central authority responsible for the machinery of government, should designate a department or departments to lead the revitalization of the approach to waste management for the Government of Canada. This should include renewing the government's targets for waste reduction, waste diversion, and green procurement within the government's wider context of greening government operations.

Government of Canada's response. Over the past decade, the government has taken steps to manage its office solid waste by implementing several innovative recycling programs and reduction and reuse initiatives. The government recognizes the need to continue and enhance implementation of 3Rs initiatives and to further develop common performance measurement and reporting. Working through the Sustainable Development in Government Operations (SDGO) initiative, the government initiated aggregate reporting with the first *Greening the Federal House* report.

Expertise related to environmental management, waste reduction, waste diversion, and green procurement exists within a number of federal organizations. Also, implementation of specific waste management initiatives often requires a partnership with municipalities and private industry. The Privy Council Office will work with these departments to facilitate co-ordination and effective horizontality.

3.99 **Recommendation.** The designated lead department or departments should work with other departments and agencies to develop implementation guidance on waste management. The guidance should be available in time to assist departments and agencies in preparing the next round of sustainable development strategies due in December 2006. It should consider the following:

- using environmental management systems, where available;
- identifying roles and responsibilities;
- providing appropriate infrastructure;
- establishing criteria for recycling in the absence of municipal programs, such as composting;
- developing education and awareness programs;
- providing regular performance feedback to building occupants;
- contracting practices for waste and recyclable hauling;
- providing common measurement indicators and cost-effective methods to measure performance across government; and
- providing a common reporting template to facilitate consolidated reporting.

Government of Canada's response. Work is underway with the Treasury Board Secretariat and key Sustainable Federal House in Order (SFHIO) departments to develop a performance management framework for sustainable operations. (The SFHIO is the governance structure integrating the SDGO and Federal House in Order initiatives.) That framework will identify the following themes: built environment, green procurement, land use management, transportation, water conservation and wastewater management, and solid waste management. Once the theme of solid waste management is fully developed, the accountability, performance, and measurement requirements of this operational aspect will be defined in time to provide guidance for the next round of sustainable development strategies due in 2006.

Environmental management systems (EMSs) provide departments and agencies with a tool to systematically address all aspects of their operations from an environmental perspective. An EMS also allows departments and agencies to use a risk management approach to managing their operations, dealing with those aspects which they determine have a more significant negative impact upon the environment.

The government will continue to strengthen these mechanisms.

3.100 **Recommendation.** Once implementation guidance has been developed, deputy heads should ensure that all departments and agencies adopt the guidance and work toward the new government-wide office solid waste commitments and goals within the wider context of greening government operations.

Government of Canada's response. Existing mechanisms are in place outlining the roles of deputy-heads. Using a risk management approach, the government will continue to work in a co-ordinated and strategic manner to ensure that its operations are managed effectively from an environmental perspective.

3.101 **Recommendation.** The designated lead department or departments should review progress and prepare a consolidated regular report on these commitments and goals.

Government of Canada's response. The application of the SFHIO Performance Management Framework will ensure that progress is reviewed and reported. In the interim, work is under way to produce the next version of the government's aggregate report, *Greening the Federal House*, to be completed by summer 2005.

Conclusion

3.102 All six departments and agencies we examined made specific commitments to divert waste in their 2001 sustainable development strategies. In most cases, the commitments were numerical, clear, and concrete.

3.103 Most departments and agencies believe they have improved how office waste is managed; however, overall they could not provide reliable information to demonstrate that they had met their sustainable development strategy commitments on office solid waste. Therefore, we could not assess to what degree progress had been achieved against these commitments. The Canada Customs and Revenue Agency met two of its three commitments and is an exception.

3.104 Departments and agencies cannot demonstrate that they are meeting their commitments because they have not implemented all the steps necessary to turn their commitments into action. Examples such as the Quebec region of PWGSC show what can be accomplished with a comprehensive approach and measurement strategy.

3.105 Some of our observations are also reflected at a higher level. The government does not know if it met its 1990 target to reduce waste generated by 50 percent by 2000. Furthermore, current departmental targets focus on diverting waste, which may not achieve the goal of reducing waste. A comprehensive waste management program needs to include targets for reduction and diversion. The federal government needs to revitalize its approach to ensure that targets and commitments will be achieved.

Conclusion

3.106 Through its policies, programs, and operations, the federal government has the opportunity to make tangible progress toward sustainable development. This year we audited a series of policy and operational commitments from the 2001 sustainable development strategies of selected federal departments and agencies. Overall, our audit found the departments and agencies we examined need to do more to meet their commitments.

3.107 The seven federal departments and agencies we audited were able to provide examples of activities undertaken toward their sustainable development commitments. However, with a few exceptions, they could not demonstrate that they have met their commitments.

3.108 It is easy to include commitments in sustainable development strategies; departments and agencies have put hundreds of them on paper. However, managing and implementing these commitments is another story. Overall, we found that departments did not pay enough attention to their commitments. Departments need to follow through with the necessary steps to turn their own words into action and demonstrate they are serious about their commitments.

About the Audit

Objective

The objective of this audit was to assess the progress made by seven federal departments and agencies on specific commitments made in their 2001 sustainable development strategies.

Scope and approach

This chapter is divided into two sections:

Using the tax system. This section focusses on three commitments made by Finance Canada in the context of its sustainable development objective to examine ways to use the tax system to better integrate the economy and the environment.

We analyzed Finance Canada's *2001-03 Sustainable Development Strategy* and its relevant files and documents, and interviewed its officials.

Managing office solid waste. This section focusses on commitments made by six departments and agencies to manage office waste:

- Environment Canada,
- Natural Resources Canada,
- Public Works and Government Services Canada,
- Canada Customs and Revenue Agency,
- Department of Justice, and
- Veterans Affairs Canada.

The first three departments are co-champions of the Sustainable Development in Government Operations initiative and have responsibilities in solid waste management.

The last three organizations were selected, in part, because they have not often been audited by the Commissioner of the Environment and Sustainable Development. In December 2003, the government separated the Canada Customs and Revenue Agency into two agencies: the Canada Revenue Agency and the Canada Border Services Agency. The commitments we examined for the Canada Customs and Revenue Agency were those in place prior to the reorganization.

Our audit approach consisted of

- developing and issuing a questionnaire to survey the departments and agencies;
- reviewing documents and files;
- visiting office buildings and observing how waste was managed in Alberta, Nova Scotia, Ontario, Prince Edward Island, and Quebec; and
- interviewing staff responsible for managing waste at headquarters and regional locations.

Some quantitative information in this chapter is based on data drawn from various federal and other sources indicated in the text. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data have not been audited, unless otherwise indicated in the chapter.

Criteria

To assess the progress made by the departments and agencies, we expected that they were

- meeting their performance expectations (they were doing what they said they would do), and
- measuring the results they achieved.

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to the House of Commons

Chapter 4

Assessing the Environmental Impact of Policies, Plans, and Programs

Office of the Auditor General of Canada

2004

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to the House of Commons

Chapter 4

Assessing the Environmental Impact of Policies, Plans, and Programs

Office of the Auditor General of Canada

The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters, and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

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Chapter

4

Assessing the Environmental Impact of Policies, Plans, and Programs

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

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Assessing the Environmental Impact of Policies, Plans, and Programs

Main Points

4.1 Overall, our audit found a low level of commitment in departments and agencies toward conducting strategic environmental assessments, despite the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals, which was first issued 14 years ago. The results of our audit, taken together, suggest that most departments have not made serious efforts to apply the directive. In fact strategic environmental assessment is far from meeting its promise in guiding policy, plan, and program development.

4.2 We found major gaps in how the directive is being applied. A number of the 12 departments we examined have put in place few of the basic management systems needed to comply with the directive. The three departments we evaluated in detail have conducted few strategic environmental assessments in the years we examined (2000, 2001, and 2002), and their completeness varies. Tracking of assessments has been inadequate, so departments cannot show that they have conducted all of the strategic environmental assessments required.

4.3 The overall application of the directive does not provide assurance that environmental issues are assessed systematically, so ministers and the Cabinet can receive sufficient information to make informed decisions on proposed policies, programs, and plans. Knowing the potential environmental impacts in advance would provide an early opportunity to adjust or modify their approach to protect the environment and human health, and to reduce future economic costs.

4.4 A number of main factors are adversely affecting the performance of departments and agencies in implementing this directive. We found insufficient commitment by senior management in some departments, which impedes the development of necessary management systems to implement the directive. In addition, no central department or agency has been tasked with the responsibility and authority to monitor the departments' and agencies' compliance with the directive and to ensure that there is adequate quality control of the assessments that are undertaken. There is limited integration of assessments into decision making.

4.5 The 1999 Cabinet directive does not require assessments to be made public, but in January 2004 a public reporting requirement was introduced. Since 1999, few of the assessments completed have been made public.

4.6 Some departments have made progress in implementing the directive since 1999. We observed examples of senior management commitment and leadership in some departments (Transport Canada, Industry Canada, Natural Resources Canada, and the Department of Foreign Affairs and International Trade). We also observed some examples of good practices that could be emulated by departments and agencies to improve their compliance with the directive.

Background and other observations

4.7 The federal government has indicated it is committed to environmental excellence in its own operations and to the goal of sustainable development. According to the Clerk of the Privy Council, "the Government of Canada is committed to integrating sustainable development in its plans, policies and programs." He notes that "this requires that decision-makers have good information and advice on the potential environmental, social and economic impacts of proposed initiatives."

4.8 In line with these commitments, the Cabinet directed federal departments and agencies, through a directive, to conduct the environmental assessment of new proposed policies, programs, and plans, so that informed decisions can be made about them.

4.9 Within the directive, ministers expect federal departments and agencies to assess the potential environmental impact of initiatives bound for Cabinet or ministerial approval. They "expect strategic environmental assessments to be conducted . . . when a proposal may result in important environmental effects, either positive or negative."

The government has responded. The departments and agencies have generally agreed with our recommendations. Their responses, including the actions they are taking or intend to take to address the recommendations, are set out in the chapter.

Introduction

Importance of environmental assessment

4.10 An environmental assessment is an examination of projects, programs, policies, plans, or activities at the planning stage to ensure that before they are approved, the potential effects on the environment receive careful consideration. An environmental assessment is a critically important planning tool, given the potential for serious and irreversible damage to the environment that can result from some human activity. Failure to consider and reduce adverse environmental effects before carrying out an initiative or undertaking can lead to significant environmental degradation, damage to human health, and economic costs.

Vangorda Pit at the Faro Mine, Yukon

4.11 The consequences of inadequate environmental foresight were illustrated in one of our previous reports on the high clean-up costs and environmental damage at abandoned mines in the North. Aquaculture in Canada also may cause pollution and impacts on fish and wildlife that could result in future clean-up costs and economic effects.

4.12 **Strategic environmental assessment—federal commitment to integrating the environment into decision making.** The Government of Canada is committed to environmental excellence and sustainable development. It has also committed to integrated decision making, both domestically and internationally, for example, through Agenda 21—a comprehensive plan of action adopted at the United Nations Conference on Environment and Development (1992), and the Convention on Biological Diversity (1992). Essentially, integrated decision making involves taking environmental, social, and economic aspects into account when a decision is made.

4.13 The main tool the Government of Canada has to integrate environmental considerations into new policies, programs, and plans is the strategic environmental assessment. The requirement to conduct these assessments was put in place through a Cabinet directive in 1990, which was revised in both 1999 and 2004. The complete text of the 1999 directive, along with revisions instituted as of 1 January 2004 is contained on page 5. The assessment of physical projects that have or require federal involvement, such as road construction and waste facilities, is a separate process and is governed by the *Canadian Environmental Assessment Act*.

4.14 **Assessment of proposed policies, programs, and plans is being applied internationally.** A number of countries and organizations, such as the Netherlands, the United Kingdom, Norway, Denmark, and the World Bank, have made formal provisions for strategic environmental assessments of policies, plans, and programs and have carried out different types of assessments. For example, the Netherlands has required environmental assessments of specific plans and programs under its 1987 *Environmental Impact Assessment Act*. The European Union has issued a directive on the assessment of certain plans and programs, and member states have to comply with it by July 2004.

Importance of the directive has been repeatedly emphasized

4.15 When the revised Cabinet directive was issued in 1999, key departments and agencies within the federal government received a letter from the Clerk of the Privy Council, the most senior official in the federal civil service. The letter expressed dissatisfaction with action to date: "The Government [of Canada] will look for environmental implications to be more fully integrated into proposals prepared for Ministers and for Cabinet consideration. . . . There is a clear expectation that renewed, and more consistent efforts, will be made across all departments."

4.16 In June 2003, the House of Commons Standing Committee on Environment and Sustainable Development tabled its report, *Sustainable Development and Environmental Assessment—Beyond Bill C-9*. Bill C-9 amended the *Canadian Environmental Assessment Act* in 2003. The report reaffirmed the importance of strategic environmental assessment but noted various problems with its implementation to date, including public reporting, and recommended that it be legislated.

4.17 The Government of Canada responded that it was modifying the Cabinet directive on strategic environmental assessment to include a requirement for the public reporting of environmental effects. This was to assure stakeholders and the public that environmental factors have been appropriately considered when decisions are made. It also committed to consider the remaining Standing Committee comments and recommendations, in conjunction with the findings of the Commissioner on strategic environmental assessment reported in this chapter and the recommendations received by the Minister of the Environment from his Regulatory Advisory Committee.

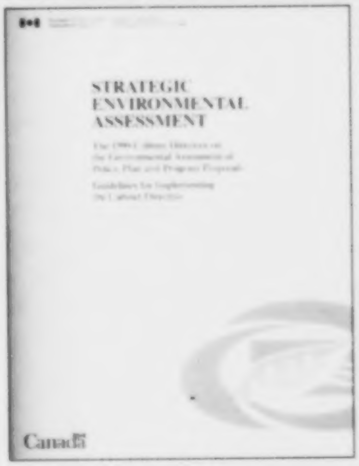
4.18 In early 2004, the Clerk of the Privy Council stated in his foreword to the revised 1999 Cabinet directive (2004) that the Government of Canada was "committed to integrating sustainable development in its plans, policies and programs." He noted that this would require that "decision-makers have good information and advice on the potential environmental, social and economic impacts of proposed initiatives."

Environmental assessment and its place in the policy life cycle

4.19 Combined with social and economic analyses, an environmental assessment for a policy initiative is supposed to inform the decision-making process. The purpose of strategic environmental assessment is essentially to help us to avoid making environmentally costly mistakes before a particular course of action is decided. It is a tool that enables the policy-maker to analyze systematically the environmental impacts of a proposed policy, program, or plan. Applying this tool rigorously will increase the chance of anticipating, preventing, or mitigating negative environmental consequences, or enhancing any positive impacts. Just like a project environmental assessment allows the decision maker to reach better-informed decisions about the consequences of a specific project, the strategic environmental assessment provides the decision maker with environmental information that could reduce the environmental costs that could follow from a particular policy, plan, or program.

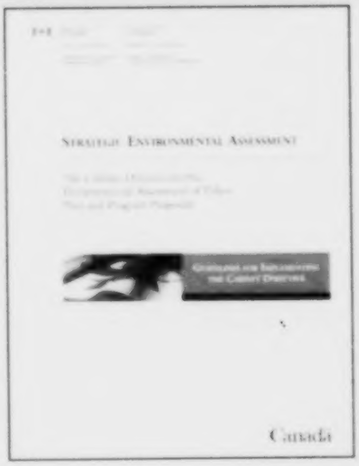
4.20 For example, if the federal government develops a policy on offshore oil exploration and development, it needs to think about the social and economic ends that it wants to accomplish. The objective may be to increase

1999 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (revised on 1 January 2004)



STRATEGIC ENVIRONMENTAL ASSESSMENT

Canada



Strategic Environmental Assessment

Canada

In 1990, the Cabinet issued a directive on the environmental assessment of policy and program proposals. In 1999, the directive was revised and expanded to include the environmental assessment of plans as well. In addition, a voluntary set of guidelines was produced and published. In January 2004, the 1999 Cabinet directive was modified to include a requirement for a public statement of environmental effects.

The following statement is the 1999 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals. Revisions to the directive, which came into force on 1 January 2004, are highlighted in italics and those elements of the directive that were removed, have been shown as struck out in the text below.

Directive:

Consistent with the Government's strong commitment to sustainable development, Ministers expect that policy, plan and program proposals of departments and agencies will consider, when appropriate, potential environmental effects.

More specifically, Ministers expect a strategic environmental assessment of a policy, plan or program proposal to be conducted when the following two conditions are met:

1. the proposal is submitted to an individual Minister or Cabinet for approval; and
2. implementation of the proposal may result in important environmental effects, either positive or negative.

Departments and agencies are also encouraged to conduct strategic environmental assessments for other policy, plan or program proposals when circumstances warrant. An initiative may be selected for assessment to help implement departmental or agency goals in sustainable development, or if there are strong public concerns about possible environmental consequences.

Ministers expect the strategic environmental assessment to consider the scope and nature of the likely environmental effects, the need for mitigation to reduce or eliminate adverse effects, and the likely importance of any adverse environmental effects, taking mitigation into account. The strategic environmental assessment should contribute to the development of policies, plans and programs on an equal basis with economic or social analysis; the level of effort in conducting the analysis of potential environmental effects should be commensurate with the level of anticipated environmental effects. The environmental considerations should be fully integrated into the analysis of each of the options developed for consideration, and the decision should incorporate the results of the strategic environmental assessment. Departments and agencies should use, to the fullest extent possible, existing mechanisms to involve the public, as appropriate. (~~and document and report on the findings of the strategic environmental assessment.~~) *Departments and agencies shall prepare a public statement of environmental effects when a detailed assessment of environmental effects has been conducted through a strategic environmental assessment. This will assure stakeholders and the public that environmental factors have been appropriately considered when decisions are made.*

The complete text of the directive's guidelines can be found on the Canadian Environmental Assessment Agency's Web site at: www.ceaa.gc.ca could reduce the environmental costs that could follow from a particular policy, plan, or program.

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STRATEGIC
ENVIRONMENTAL
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Canada

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The complete text of the directive's guidelines can be found on the Canadian Environmental Assessment Agency's Web site at: www.ceaa.gc.ca

Eirik Raude offshore drilling rig, Nova Scotia

Photo: Ocean Rig ASA

the gross domestic product, energy exports, and/or employment opportunities for instance. The government also needs to consider the social and economic factors that will affect the policy's success. These could include, for example, compatibility with other economic activities such as fishing and tourism, downstream benefits to local and provincial economies, impacts on First Nations, and potential disruption of local communities. The government also needs to understand the environmental implications of the decisions it is making, for example, disturbance of marine life by seismic surveys, damage to marine habitat from drilling waste, and cumulative impacts on fish stocks and marine mammals. Ultimately, the government makes decisions based on the social, economic, and environmental information that is provided and its own priorities.

4.21 Once a policy is developed and the strategic environmental assessment completed, the results should be considered in the development of any related programs and plans. Ultimately, these assessments should provide the framework for the environmental assessments that may be conducted for individual projects under the *Canadian Environmental Assessment Act*. A strategic environmental assessment could identify overall mitigation measures or types of technology that would have to be incorporated into all project environmental assessments and put into practice when a project is implemented. Exhibit 4.1 compares the differences between a strategic environmental assessment of a policy, program, or plan and an environmental assessment of a project.

Exhibit 4.1 **What is the difference? Environmental assessment of policies, programs, and plans versus projects**

Policy, program, or plan		Project
Strategic environmental assessment (SEA)	**Term**	Environmental impact assessment (EIA)
Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals and accompanying guidelines	**Mandate**	*Canadian Environmental Assessment Act* and associated regulations (for example, Comprehensive Study List Regulations, Exclusion List Regulations, Inclusion List Regulations, Law List Regulations)
• a transport or infrastructure policy • an aquaculture policy • an energy policy or program • a tax policy for non-renewable and renewable energy	**Examples**	• a highway construction project • an aquaculture operation • an oil sands facility • a wind farm

Federal responsibilities in applying the directive

4.22 The 1999 Cabinet directive applies to all departments and agencies. It states

> Ministers expect a strategic environmental assessment of a policy, plan or program proposal to be conducted when . . . the proposal is submitted to an individual Minister or Cabinet for approval; and implementation of the proposal may result in important environmental effects, either positive or negative.

4.23 The accompanying guidelines indicate that departmental and agency officials "are responsible for ensuring that environmental considerations are properly integrated into the development of policy, plan and program proposals." Roles are also assigned to Cabinet itself, all ministers individually, the Minister of the Environment, and specific roles for Environment Canada and the Canadian Environmental Assessment Agency.

4.24 The Canadian Environmental Assessment Agency, according to the directive's guidelines, will "in support of the Minister of the Environment, . . . promote the application of strategic environmental assessment to policy, plan and program proposals of the federal Government." In addition, the Agency "will provide guidance and training to improve the implementation of the strategic environmental assessment of policies, plans and programs."

4.25 Environment Canada is responsible for consulting with "other departments and agencies and providing expert policy, technical and scientific analysis and advice on sustainable development and the potential environmental effects of policy, plan and program initiatives."

Past audit observations—slow and unsatisfactory progress

4.26 In our 1998 Report, Chapter 6, Environmental Assessment—A Critical Tool for Sustainable Development, we concluded that departments and agencies had been slow to implement the 1990 Cabinet directive. We recommended they improve their compliance. In our 2000 follow-up report, we noted that the Canadian Environmental Assessment Agency, in collaboration with an interdepartmental team, had made efforts to strengthen and clarify the Cabinet directive. However, we found that improved compliance had yet to be demonstrated, and we evaluated the progress to date as unsatisfactory.

Focus of the audit

4.27 **Application of the directive.** The principal focus of this audit was to determine whether the federal government is applying the 1999 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals. We assessed the following 12 departments and agencies against one or more of three sub-objectives (see **About the Audit** at the end of the chapter):

- Agriculture and Agri-Food Canada
- Canadian International Development Agency

- Citizenship and Immigration Canada
- Department of Foreign Affairs and International Trade (non-trade initiatives)
- Environment Canada
- Finance Canada
- Fisheries and Oceans Canada
- Health Canada
- Industry Canada
- Natural Resources Canada
- Public Works and Government Services Canada
- Transport Canada

4.28 We also looked at the roles and responsibilities of four federal organizations with cross-departmental roles: the Canadian Centre for Management Development (now the Canada School of Public Service), the Canadian Environmental Assessment Agency, the Privy Council Office, and the Treasury Board Secretariat.

4.29 We identified selected examples of good practices in strategic environmental assessment to highlight potential areas of practice improvement in departments and agencies.

4.30 **Meeting commitments.** The secondary focus of our audit was to assess progress made by federal departments toward specific commitments related to strategic environmental assessments made in their sustainable development strategies. A number of departments and agencies have made commitments related to strategic environmental assessments in their strategies. We focussed our attention on the commitments made by Agriculture and Agri-Food Canada, Industry Canada, and the Treasury Board Secretariat in their 2001–2003 strategies.

4.31 For more information on our objectives, scope, approach, and criteria, see **About the Audit** at the end of the chapter.

Observations and Recommendations

Directive's application far from complete

4.32 Our past audits have found that departments and agencies were slow to implement the directive and that progress over time was unsatisfactory. In this audit we found that since the directive was updated in 1999, the results have been mixed. We also observed mixed progress by the three departments in meeting specific commitments in their sustainable development strategies (Exhibit 4.2). In addition, we have some concerns with certain departmental responses to a petition on strategic environmental assessment (Exhibit 4.3).

Exhibit 4.2 **Progress in meeting commitments on strategic environmental assessment**

We assessed the progress Agriculture and Agri-Food Canada, Industry Canada, and the Treasury Board Secretariat have made in meeting their commitments on strategic environmental assessment in their second set of sustainable development strategies tabled in February 2001. We are satisfied with the progress that Industry Canada has made; however, we are not satisfied with the progress that Agriculture and Agri-Food Canada and Treasury Board Secretariat have made.

Commitment	Progress	Comments
Agriculture and Agri-Food Canada*		
On an ongoing basis, policy analysts and senior management will receive training about sustainable development.	○	The Department has indicated it plans to develop a training program for strategic environmental assessment, but this has not yet been developed. The Department's strategic environmental assessment co-ordinator offers to give advice to those drafting assessments.
By 31 March 2003, there will be a formal process in place to ensure the analysis of policies and programs from the perspective of sustainable development.	◓	The Department has strategic environmental assessment guidance in place. A basic structure for the management of strategic environmental assessments was approved by the Department (November 2003). Specifics are still being finalized.
By 31 March 2004, the Department will undertake reviews of existing and new policy, programs, and initiatives from the perspective of sustainable development.	◓	The Department conducted strategic environmental assessments for Agricultural Policy Framework components in 2002 and 2003. The Department considers the Agricultural Policy Framework its framework for sustainable development. Within its sustainable development strategy, it had committed to publishing reports on the results of sustainable development reviews and reviewing how the information was used to improve the outcomes of sustainable development activities. However, the Department did not publish most strategic environmental assessments or explicitly review whether they were used to make improvements.
Industry Canada		
It will improve and formally adopt a set of guidelines and a template for conducting strategic environmental assessments within the Department. The improvements will be based on an internal evaluation, as well as a review of best practices with the Canadian Environmental Assessment Agency and other federal departments.	●	The Department has implemented its commitments.
It will build up the capacity for effectively conducting improved strategic environmental assessments within the Department. More specifically, these include providing a Web site, training, and annual reports on assessment applications.	●	The Department has implemented its commitments.

● Satisfactory progress ◓ Some progress ○ Limited or no progress

*Agriculture and Agri-Food Canada's commitments were only evaluated from the perspective of strategic environmental assessment.

Exhibit 4.2 **Progress in meeting commitments on strategic environmental assessment (Continued)**

Commitment	Progress	Comments
Treasury Board Secretariat		
The Secretariat will develop and apply a framework for the application of strategic environmental assessment to its policies and programs.	○	The Department has incorporated the requirements for strategic environmental assessment into the Treasury Board Submission Drafter's Guide, which applies to all federal organizations including the Secretariat. The Guide notes that departments should use appropriate frameworks and techniques in conducting strategic environmental assessments.The Department did not provide evidence that a framework exists to ensure that strategic environmental assessments, if required, are conducted during the early stages (as per the directive) of development for any new policies, programs, or plans.

● Satisfactory progress ◓ Some progress ○ Limited or no progress

Source: Second set of sustainable development strategies tabled in February 2001

4.33 As we have indicated, this audit adopted a three-tier approach to assess whether the federal government is applying the directive.

- Twelve departments and agencies were audited on their preparedness to apply the directive in their organizations through the design and documentation of key management system elements relating to accountability, screening, tracking, guidance, and training.
- Six of these departments were assessed on whether they are taking steps to implement these systems.
- Finally, three of these departments were assessed to determine if they are conducting assessments when needed.

Additional details on this approach and how departments and agencies were selected are contained in the **About the Audit** at the end of the chapter.

Some departments are lacking basic management system elements

4.34 Management systems are key to ensuring that tasks are completed and that records for follow-up, monitoring, and evaluation are kept. As departments and agencies are expected to comply with the directive, deputy heads are ultimately accountable for ensuring that required systems are put into place. Key elements of a management system include accountabilities, screening, tracking, guidance, and training. Exhibit 4.4 provides the outline of a generic system for conducting strategic environmental assessments.

4.35 Of the 12 departments and agencies we audited, three do not have most of the basic management systems in place—Fisheries and Oceans Canada, the Canadian International Development Agency, and Health Canada. Three other departments stood out as having generally satisfactory

Exhibit 4.3 **Evaluation of responses to petition No. 64: Strategic environmental assessment of federal policies, plans, and programs**

During this audit, a petition on strategic environmental assessment of federal policies, plans, and programs was submitted to the Auditor General of Canada. Parliament established the petitions process, so Canadians could receive timely answers from federal ministers to questions and concerns related to environmental and sustainable development matters.

We compared the portion of the petition responses related to the scope of our audit work, to our audit results. We are generally satisfied with the responses submitted by the departments and agencies we audited. However, some departments had made some statements in their petition responses that they were unable to support:

- Fisheries and Oceans Canada in its petition response stated that the Department "determines whether environmental considerations are likely to arise from implementing the proposed policy, plan or program by conducting a preliminary scan. The scan enables the analyst to identify the potential for direct or indirect outcomes associated with implementing the proposal. If the scan determines that there are no potential outcomes, there is no further analysis required." The Department did not provide evidence that preliminary scans and screening, with regard to the Cabinet directive, were being done.
- Health Canada indicated that strategic environmental assessment considerations are holistically integrated into its development of new proposals. However, the Department has limited processes in place that can ensure compliance with the directive.
- Finance Canada indicated that it had launched an "enhanced strategic environmental assessment process" in May 2003. Yet, the Department could not show that before then it had any process in place. The Department stated that two informal strategic environmental assessments were conducted prior to May 2003, but it was unable to provide evidence that these assessments had been undertaken.

systems in place when we started our examination—Transport Canada, Industry Canada, and the Department of Foreign Affairs and International Trade. The remaining departments fall somewhere in between. All 12 departments and agencies have room for improvement. Almost all departments and agencies revised their systems during the course of our audit, and two departments started putting systems in place after our audit began. The detailed results by department are contained in Exhibit 4.5.

Implementation of necessary management systems is mixed

4.36 Four of the six departments we assessed were able to provide evidence that they were satisfactorily implementing their management systems—Industry Canada, Natural Resources Canada, Department of Foreign Affairs and International Trade, and Transport Canada. Agriculture and Agri-Food Canada has only achieved some progress to date in implementing the management system elements we assessed. Fisheries and Oceans Canada has conducted a few strategic environmental assessments; however, it has done little in terms of implemented systems and has poorly documented systems. As of March 2004, Fisheries and Oceans Canada had prepared a draft strategic environmental assessment manual. The detailed results by department are contained in Exhibit 4.6.

Exhibit 4.4 **Generic process and elements for conducting strategic environmental assessments**

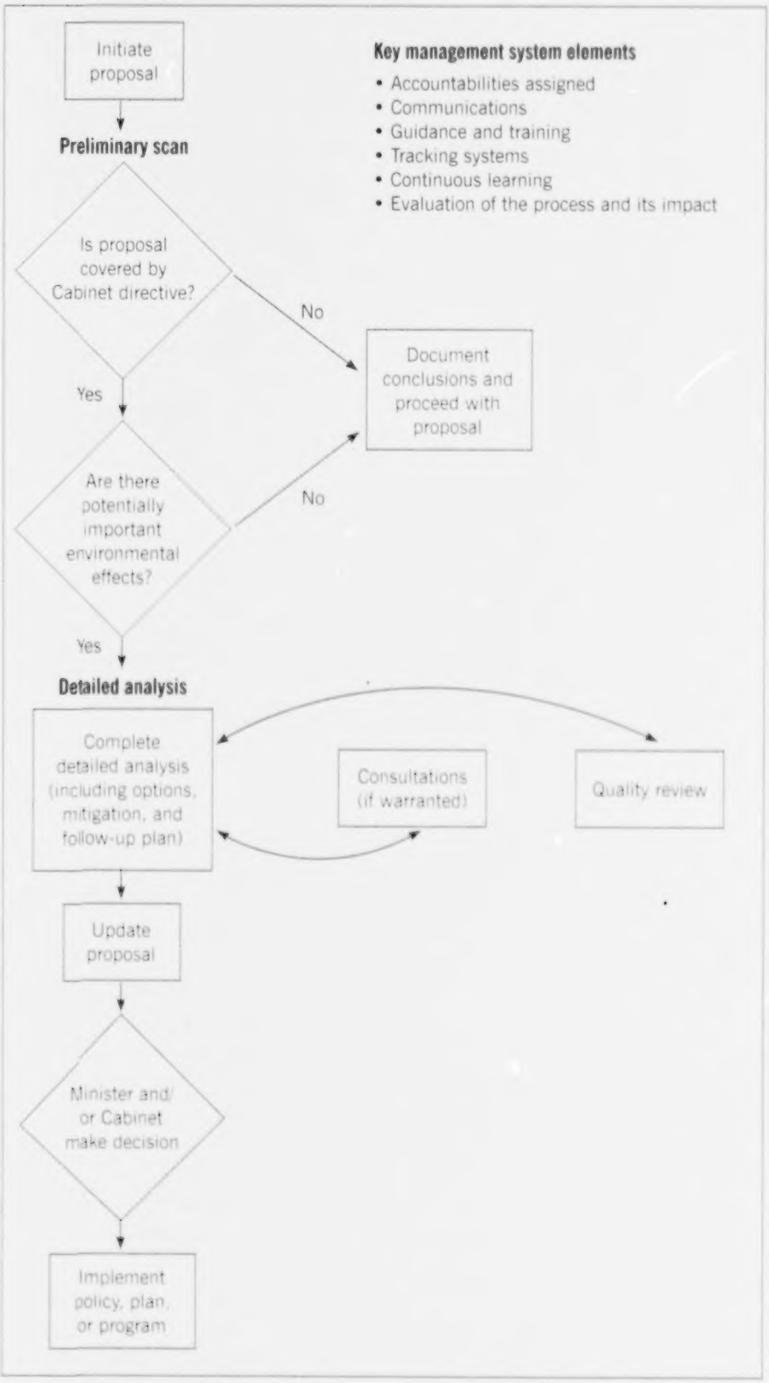
Initiate proposal
Preliminary scan
Is proposal covered by Cabinet directive?
No
Yes
Document conclusions and proceed with proposal
Are there potentially important environmental effects?
No
Yes
Detailed analysis
Complete detailed analysis (including options, mitigation, and follow-up plan)
Consultations (if warranted)
Quality review
Update proposal
Minister and/ or Cabinet make decision
Implement policy, plan, or program
Key management system elements
• Accountabilities assigned
• Communications
• Guidance and training
• Tracking systems
• Continuous learning
• Evaluation of the process and its impact

Exhibit 4.5 **Departmental report card—Have Departments and Agencies designed management systems?**

We assessed whether there was significant evidence of documented systems by the departments and agencies. It does not mean that the documented systems are implemented, that strategic environmental assessments are conducted when needed, or that the assessments are of good quality.

Department or agency	Accountabilities[1]	Tracking systems[2]	Training and guidance[3]	Comments
Agriculture and Agri-Food Canada	●	◓	◓	Most improvements were put in place only in November 2003 or later.
Canadian International Development Agency	○	○	○	Draft guidance has been under development for a number of years and has not been systematically distributed. The Agency has completed a number of strategic environmental assessments.
Citizenship and Immigration Canada	◓	◓	◓	System elements were only developed in spring 2003.
Department of Foreign Affairs and International Trade (non-trade initiatives)	◓	●	●	Requirements for filing strategic environmental assessment forms in a central location were put in place in March 2003.
Environment Canada	◓	◓	●	Environment Canada's Environmental Assessment Branch has maintained a database to track its involvement with memoranda to Cabinet (which sometimes includes strategic environmental assessment), with information going back to 1994. The Department finalized some system improvements, such as a new strategic environmental assessment guide, during the course of the audit. It has also developed an improved electronic tracking system and screening form which are not yet in place.
Finance Canada	◓	◓	◓	System elements were only put in place in May 2003.
Fisheries and Oceans Canada	○	○	○	Few system elements are in place. The Department's Policy Sector has been given the lead for strategic environmental assessment. However, specific accountabilities have not been developed, nor has a tracking system and related training. The Department has prepared a draft strategic environmental assessment manual (March 2004), but it is not yet in place.
Health Canada	○	○	○	Few system elements are in place.
Industry Canada	◓	●	●	Department conducted evaluation of pilot approach to implementing the directive.
Natural Resources Canada	●	◓	◓	Department has drafted an enhanced strategic environmental assessment manual.
Public Works and Government Services Canada	○	●	○	Department has drafted a strategic environmental assessment guideline, which includes accountabilities.
Transport Canada	●	●	●	Accountabilities could be clearer on sign-off requirements.

● Satisfactory progress ◓ Some progress ○ Limited or no progress

[1] Accountabilities—The accountability chain, within the department or agency, is documented and generally includes responsibilities for communicating requirements and providing guidance, conducting quality review, signing off on assessments, and filing documents produced.

[2] Tracking systems—Documented procedures are available for tracking and screening proposals subject to the directive, and tracking whether assessments have been completed.

[3] Training and guidance—Tailored guidance on how to conduct an assessment and what needs to be in an assessment, and tailored training on how to conduct assessments are documented.

Exhibit 4.6 **Departmental report card—Have departments made progress in implementing management systems?**

We assessed whether departments are implementing their management systems at a basic level. This does not mean that strategic environmental assessments are conducted when needed, or that the assessments are of good quality.

Department	Accountabilities[1]	Tracking systems[2]	Training and guidance[3]	Comments
Agriculture and Agri-Food Canada	◓	◓	◓	Department has limited evidence of management review and approval.
Department of Foreign Affairs and International Trade (non-trade initiatives)	◓	●	●	Strategic environmental assessment is applied only to memoranda to Cabinet. Strategic environmental assessment forms have been filed in a central location since March 2003.
Fisheries and Oceans Canada	◓	○	○	There is evidence that three assessments have been conducted.
Industry Canada	●	●	●	Rationale for not conducting some strategic environmental assessments are brief with little context and background.
Natural Resources Canada	●	●	●	The tracking system was implemented, starting in February 2002.
Transport Canada	●	●	●	A basic tracking system was developed in June 2001, but the current, more comprehensive tracking systems were put in place in February 2002.

● Satisfactory progress ◓ Some progress ○ Limited or no progress

[1] Accountabilities—Accountability chain within the department has been implemented and shows that they are communicating the requirement to conduct assessments and keep track of documents produced, and that they have started to conduct quality reviews and get assessments signed off by managers.

[2] Tracking systems—Tracking systems have been implemented and departments are following procedures for tracking and screening proposals subject to the directive and for tracking whether assessments are completed.

[3] Training and guidance—Departments are providing guidance and training to those who require it.

Gaps in coverage in applying the directive

4.37 We assessed whether three departments (Industry Canada, Transport Canada, and Agriculture and Agri-Food Canada) were conducting strategic environmental assessments when required. These departments had identified over 500 proposals (including memoranda to Cabinet, Treasury Board submissions, and others) that they had submitted for approval by their minister or by the Cabinet in 2000, 2001, and 2002. There is some overlap as several proposals may relate to the same initiative.

4.38 None of the departments could show that they had screened (or conducted a preliminary assessment for) all proposals that had been put forward to ministers or the Cabinet to see if a strategic environmental assessment was required. In terms of detailed strategic environmental assessments, the three departments were able to provide us with evidence that a total of 12 assessments had been completed during those years.

4.39 **Tracking systems were deficient until recently.** Our audit found that Agriculture and Agri-Food Canada has limited data available for those years, as it only started developing a tracking system for strategic environmental assessments in 2004. Industry Canada and Transport Canada did not have fully functioning tracking systems during the period from 2000 to 2002; however, tracking had improved by 2002. Therefore, the three departments could not demonstrate that the 12 strategic environmental assessments conducted were the only ones needed during that period.

Completeness of assessments varies

4.40 We looked at the 12 completed strategic environmental assessments to see whether they met key elements identified in the directive's guidelines. These elements included identification and analysis of key environmental issues, identification and discussion of proposed options and mitigation measures, and need for consultation and follow-up.

4.41 Transport Canada's Strategic Highways Infrastructure Program is an example of a fairly complete assessment. However, all the assessments we reviewed were missing at least a few key elements which were identified in the directive's guidelines. Few of the assessments reported on the need for, or the results of the consultations relevant to the strategic environmental assessment. Other shortcomings included a lack of reference to follow-up requirements.

Good practices identified

4.42 **Good practices exist in some federal departments.** Some departments have developed processes to implement the 1999 Cabinet directive and have conducted strategic environmental assessments. Some departments developed separate stand-alone systems, while other departments like Industry Canada integrated the requirements into existing systems. We found good examples of accountability structures, documented guidance, on-line guidance, and strategic environmental assessment screening and tracking systems in the departments and agencies we assessed (Exhibit 4.7). Most of these practices have been developed in the past three years.

4.43 Overall, Transport Canada's documented strategic environmental assessment system has most of the elements that enable it to conduct strategic environmental assessments. The Department's Strategic Environmental Assessment Policy Statement was put in place in 2001. It affirms the Department's commitment to strategic environmental assessments, provides guidance, and describes relevant accountabilities. The Department has developed additional guidance and training materials, which it subsequently reviewed in March 2004 with the introduction of public reporting requirements into the directive on 1 January 2004. The Department has also developed a comprehensive tracking system to monitor activity on strategic environmental assessments.

Exhibit 4.7 **Good practices in strategic environmental assessment**

Accountabilities—Natural Resources Canada

Natural Resources Canada's Departmental Environmental Policy provides clear and structured accountabilities from the deputy minister down to the employee. The Office of Environmental Affairs has to be satisfied with every strategic environmental assessment before it recommends that the assistant deputy minister sign off a proposal for which an assessment was completed.

Documented guidance—Environment Canada

Environment Canada has a guide with step-by-step instructions for conducting a strategic environmental assessment, as well as worksheets for key steps. Moreover, the guide provides case studies and contact names for assistance. The guide, which is included in the package provided to staff responsible for preparing proposals, has an interactive CD-ROM on strategic environmental assessment. The Department also has an intranet page on the strategic environmental assessment requirements.

Agriculture and Agri-Food Canada, Citizenship and Immigration Canada, the Department of Foreign Affairs and International Trade, and Transport Canada are other departments with examples of good practices in documenting guidance.

On-line guidance—Department of Foreign Affairs and International Trade

The Department provides on-line strategic environmental assessment training to staff via its Intranet. This site includes an executive message establishing ministerial commitment to strategic environmental assessment, its definitions and core concepts, an overview of the international and Canadian contexts for this type of assessment, how it is applied within the Department including elements of the assessment process, information on the benefits of this type of assessment, case studies, frequently asked questions, and self-tests.

Strategic environmental assessment tracking system—Transport Canada

Transport Canada's current system identifies each initiative, its status, the responsible group and office of primary interest, and whether a strategic environmental assessment is required. It also indicates whether a preliminary scan and/or a detailed assessment are required, whether these have been completed, and the completion dates. It tracks the date when the Environmental Affairs Directorate notified the proponent of the requirement for the strategic environmental assessment, when the proponent replied, whether Environmental Affairs reviewed the assessment, who the contact is at Environmental Affairs, and whether the final strategic environmental assessment is on file and a link to it.

Main factors contributing to the performance gap

4.44 Why is there still a performance gap? Fourteen years after the first directive was issued, we expected that all departments would have, at the very least, basic systems in place. Overall, there are varying degrees of commitment to the directive. Some departments have developed well-thought-out systems, while others were just developing system elements during the later stages of our audit. Some of the strategic environmental assessments we reviewed were fairly robust while others were quite limited. In some cases, there were no strategic environmental assessments for proposals that would potentially have environmental impacts, for example, Finance Canada's Bill C-48 (Exhibit 4.8). Based on our audit work, we believe that there are a number of main factors that have contributed to this performance gap.

Exhibit 4.8 **No strategic environmental assessment for Bill C-48: An act to amend the *Income Tax Act***

Pursuant to the 2003 Budget announcement, Finance Canada developed Bill C-48—a proposal for a reduction in the corporate tax rate for the resources sector, similar to that provided previously to other industry sectors, to support growth in resources development. The Department also proposed a measure to eliminate some preferential treatment to the resource sector and promote efficiency. Finance Canada did not conduct a strategic environmental assessment on this bill. An assessment would have highlighted possible secondary environmental effects (negative and positive)—such as effects on habitat, sediment loading, and greenhouse gas emissions—and potential adjustments to address impacts that could result from this tax measure.

At a hearing on the proposed legislation, a member of the House of Commons Standing Committee on Finance put forward the question, "Do the proposed tax changes take into account the environmental cost of economic activity in the non-renewable resource sector?" Had Finance Canada prepared a strategic environmental assessment, it would have been in a better position to answer the question more fully. The Department's answer provided information on the allocation of resources more consistent with underlying economic factors but did not take the next logical step to talk about what that meant for the environment.

We also comment on the lack of environmental analysis of Bill C-48 in Chapter 3 of this Report.

Insufficient senior management commitment to the directive

4.45 **Varying commitment by senior management.** We expected that senior management would convey their commitment by clearly communicating the importance of the issue to the organization. Commitment would also be conveyed by a clear articulation of the expected outcomes. The organization would also put sufficient resources and personnel in place to address the identified outcomes. Lastly, senior management would verify that the commitments and expected outcomes had been met.

4.46 In some departments, there is limited evidence that senior management have committed to fulfilling their obligations under the Cabinet directive. Departments that have shown clear senior management commitment, such as Industry Canada, Natural Resources Canada, Department of Foreign Affairs and International Trade, and Transport Canada, have made the most progress in applying the Cabinet directive. The Minister of Industry noted, in his response to a petition on strategic environmental assessment in 2003, that "strategic environmental assessments play a positive role in helping to integrate environmental considerations into decision-making." Transport Canada's Strategic Environmental Assessment Policy Statement notes that strategic environmental assessment is an essential component for an "integrated decision-making framework." Departments that have made the least progress, for example, Fisheries and Oceans Canada, the Canadian International Development Agency, and Health Canada, show little evidence of senior management commitment.

4.47 **Recommendation.** Deputy heads, of all departments and agencies included in this audit, should ensure that their organization is fully implementing the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals. They should ensure that their organization has a management system in place for the proper application of the directive. This system should include the following steps:

- Identify and describe proposals that require approval by the departments' or agencies' minister or the Cabinet.
- Establish an organizational accountability structure.
- Develop and implement tracking systems to track all proposals subject to the directive, preliminary scans, and detailed assessments that are conducted.
- Provide internal guidance and training to managers and staff who are involved in the preparation of policy, program, and plan proposals.
- Establish quality control, consultation, communication, follow-up, and evaluation procedures.

Deputy heads of all departments and agencies not included in this audit should take into account this recommendation when considering how their organization applies the directive.

Government's response. Strategic environmental assessment is one of a number of tools, including sustainable development strategies, laws (such as the *Canadian Environmental Assessment Act*), and policy instruments (including international environmental agreements), that require federal officials to consider the environmental implications of their recommendations to decision makers.

As part of their ongoing commitments, deputy heads are required to ensure that the Cabinet directive is implemented within their organizations, and that appropriate management systems consistent with the Commissioner's recommendations are put in place by December 2005. In establishing such systems deputy heads must consider organizational requirements, efficiencies to be gained through interdepartmental co-operation, and value for money.

Timeline for completion of action(s):

- Management Systems—December 2005

Lack of central ownership and support

4.48 **No central monitoring and quality control roles assigned.** According to the directive's guidelines, departmental and agency officials are responsible for ensuring that environmental considerations are properly integrated into the development of policy, plan, and program proposals. To ensure compliance with the directive, departments and agencies need to implement appropriate management systems, ensure that assessments are conducted when required, and assess the quality of their assessments.

4.49 The directive and its guidelines do not assign overall responsibilities for monitoring compliance with the directive to ensure that deputy heads are held accountable. The responsibility for overall quality control to ensure that the assessments that are conducted are credible in the eyes of decision makers has not been similarly assigned. Nor has the responsibility been assigned for reviewing the application of the directive to allow for the continuous improvement of the directive itself and its application. None of the four federal organizations with cross-departmental roles we assessed has systematically taken on these tasks.

4.50 In its 2003 report, the House of Commons Standing Committee on Environment and Sustainable Development noted that the "Privy Council Office has declined responsibility for implementing the 1990 and 1999 Cabinet directives, relying on the Canadian Environmental Assessment Agency, which has virtually no authority to ensure that federal departments (let alone ministers) comply." It noted that the Privy Council Office, "which serves as the prime minister's department as well as the secretariat for Cabinet, must take a leadership role if strategic environmental assessments are to be effective."

4.51 To ensure that deputy heads are complying with the directive, central agencies have a number of options. Monitoring compliance could take the form of central agencies going into departments and agencies to assess compliance with the directive, or departments and agencies could prepare regular reports on their compliance, which a central agency would receive and review.

4.52 For quality control, the current system relies on departments to assess the quality of the proposals developed and on departments and ministers to raise outstanding issues during interdepartmental and Cabinet meetings. We found that in some cases departments provided quality feedback on their own specific assessments. In other cases, departments could not demonstrate that this quality feedback had been provided. This contrasts with the Netherlands, for example, where the Environmental Impact Assessment Commission is mandated to review the quality of environmental assessments that have been conducted and to issue an opinion on them. Quality control could take the form of a central agency reviewing the quality of all key assessments or setting specific standards and ensuring that adequate quality control has taken place within the organizations conducting the assessments.

4.53 **Canadian Environmental Assessment Agency fulfilling assigned roles.** Our audit work found that since the 1999 Cabinet directive was introduced, the Agency has made an effort to engage other departments in applying the directive and to promote and educate government officials about it. This has included the use of a variety of tools, including presentations and marketing materials. The Agency has chaired an interdepartmental committee on strategic environmental assessment and has led the preparation of additional guidance on the Cabinet directive. In addition, it organized a two-day workshop on strategic environmental assessment in March 2004 that was attended by over 125 participants from over 25 federal organizations.

4.54 The majority of the departments assessed during our audit stated that they believe the Agency is carrying out its roles and responsibilities with respect to the directive, and they are satisfied with the quality of the guidance and support the Agency has provided to them.

4.55 **Recommendation.** The Privy Council Office, as the central authority responsible for the machinery of government, should ensure that responsibilities and authorities have been assigned for

- central monitoring of compliance with the Cabinet directive on an ongoing basis,
- adequate quality control of the assessments undertaken, and
- continuous improvement of the assessment process.

The Privy Council Office should ensure that these responsibilities are being fulfilled and ensure the results are used to hold deputy heads accountable for implementing the directive.

Government's response. Consistent with the federal government's commitment to self-assessment, in line with recommendation 4.47, departments and agencies will continue to be accountable for the quality of their analysis and will establish appropriate management systems to ensure accountability and quality control. When proposals are submitted to Cabinet for decision, central agencies have an important challenge function to play. The Canadian Environmental Assessment Agency will support central agencies in this role and continue to provide support to departments and agencies with respect to implementation of the directive. Departments and agencies will continue to be accountable for the quality of assessments of proposals that are submitted to individual ministers for decision, and that are not subject to Cabinet process, and will report on them, as necessary.

With respect to quality of analyses, the expertise required to provide this function does not reside within just one federal organization. Rather, expertise in the areas of environmental management, environment and human health, and natural resources management is distributed among a number of federal organizations. These expert organizations should be consulted, as necessary, by departments and agencies conducting strategic environmental assessments.

The National Science Advisor will be consulted to assist in securing expertise within or outside of the government.

Timeline for completion of action(s): Immediately

Limited integration into decision making and assessment of effects

4.56 Departments sometimes treat a strategic environmental assessment as a separate, isolated track, or "silo," which is not integrated with other analyses. This may result in missed opportunities to use the assessment, in conjunction with other social and economic analyses, to influence the development of subsequent policies, programs, plans, and projects. The preparatory work for Transport Canada's initiative, Straight Ahead—A Vision for Transportation in Canada, included multiple lines of research work and consultations, but these were not incorporated into the strategic environmental assessment that was conducted.

4.57 Under the Cabinet directive guidelines, a strategic environmental assessment is required at only one stage of the government's consideration of a proposal or undertaking. A department can decide not to do another assessment (or not to update its assessment) if one has already been prepared, even though the initiative may have changed considerably over time.

4.58 We found that departments sometimes had trouble grappling with doing a one-time-only strategic environmental assessment, given the reality that there are many decision points for response to any issue. Ideally, a strategic environmental assessment would be integrated into decision making over the life cycle of the undertaking, which could include policies, plans, programs, and projects.

4.59 Doing an in-depth assessment when the specifics of a program have not yet been developed is sometimes not realistic. Departments sometimes wait to do the assessment at a later point. Agriculture and Agri-Food Canada did not conduct strategic environmental assessments on the Agricultural Policy Framework prior to the federal-provincial-territorial agreement-in-principle on an action plan in June 2001. Most of the strategic environmental assessments were not conducted before the Agricultural Policy Framework was submitted for Cabinet approval in 2002 but were completed before Treasury Board funding approval was sought in 2003. In other cases, departments are doing the high-level assessment earlier on, to help them set a program's direction but are not following this up, when they have specific directions (for example, the Program for Sustainable Aquaculture, see Exhibit 4.9).

Farming in Canada

4.60 We did find a few examples in which there was a follow-through of analysis from a high-level strategic environmental assessment to more specific decisions.

Salmon farm open net pens in marine coastal British Columbia

Exhibit 4.9 **The Program for Sustainable Aquaculture: Lack of continuity and missed opportunities for strategic environmental assessment impact**

In 2000, the Program for Sustainable Aquaculture was launched. A strategic environmental assessment had been conducted in 1999 for a broad aquaculture development program; however, Fisheries and Oceans Canada was unable to identify the final version of the assessment and could not provide evidence that a senior manager had signed off on the assessment. The Department could not determine whether the assessment was developed beyond the 1999 proposed program and was unable to show that the assessment was integrated and used in developing the Program for Sustainable Aquaculture.

In 2001, Fisheries and Oceans Canada developed the Aquaculture Policy Framework. The Department did not conduct a strategic environmental assessment on this high-level initiative. It explained that because the initiative was not submitted to a minister or Cabinet for approval, it was exempt from the directive. This key policy does however contain a forward that is signed by the Department's Minister. In not applying the directive to "other policy, plan or program proposals when circumstances warrant" the Department missed an opportunity to provide decision makers with an analysis of the potential positive or negative environmental effects of this initiative.

McBride Lake Wind Farm, Alberta

Photo: Natural Resources Canada

Construction of 5-Mile Yoho Bridge in Kicking Horse Canyon, British Columbia—Strategic Highway Infrastructure Program Project

Photo: Transport Canada

4.61 Natural Resources Canada completed a strategic environmental assessment of its Wind Power Production Incentive in spring 2002. The assessment found that some significant negative environmental effects could be reduced by siting turbines away from natural habitats, bird-migrating corridors, and human settlements.

4.62 The Department prepared a guide for conducting project assessments that covered the issues raised in the initial strategic environmental assessment. This highlighted important environmental issues, so that they would not be missed when decision makers reviewed project applications. The project environmental assessment for the Cypress Wind Power Project in Saskatchewan included measures to reduce negative effects, for example, locating wind turbines at least 1,000 metres from the nearest residence to minimize noise disturbance and limiting their construction during sensitive bird-breeding and nesting periods.

4.63 Transport Canada's strategic environmental assessment for the Strategic Highway Infrastructure Program stated that environmental assessments should be conducted "at the regional level for those provinces with numerous projects in a given region." To ensure environmental protection, it would also be necessary to conduct specific assessments at each site. The regional strategic environmental assessment for the British Columbia Lower Mainland Border Crossing Projects was undertaken in January 2003 to meet this requirement.

4.64 **Has the directive had an impact?** In 1996, the Canadian Environmental Assessment Agency conducted a review of the implementation of the 1990 Cabinet directive. Since the 1999 Cabinet directive was put in place, a few departments have assessed their systems. However, to date there has been no formal evaluation of the impacts or barriers and the success factors in the implementation of the directive.

4.65 Generally, departments and agencies do not know how the strategic environmental assessments they have done have affected the decisions made, and, in turn, what the ultimate impacts on the environment are. Information on the impacts of strategic environmental assessments and an assessment of the directive's implementation should be required before the next review of the *Canadian Environmental Assessment Act* by 2010. This review is a mandated requirement under the Act.

4.66 **Recommendation.** The Privy Council Office, as the central authority responsible for the machinery of government, should ensure that an evaluation of the Cabinet directive is completed by the end of 2008 in time for the next review of the *Canadian Environmental Assessment Act*. The evaluation should report on the status of implementation by all departments and agencies and the main elements addressed in our chapter. In addition, the evaluation should report on the impacts that strategic environmental assessments have had on the policies, programs, and plans developed for ministers and the Cabinet. The results of this evaluation should be made public prior to the Act's review. Based on the evaluation, the Privy Council

Office should examine the design of the Cabinet directive and consider whether legislation is warranted.

Government's response. The Privy Council Office, in collaboration with federal departments and agencies, will ensure that an evaluation is completed by 2008. The results of the review will be made public and will inform decisions about the form and structure of the Cabinet Directive.

Timeline for completion of action(s):

- Terms of Reference—January 2007
- Interim Report—October 2008
- Final Report and Public Release—December 2008

Transparency generally absent in directive's application

4.67 **The process is not transparent—a double standard?** The directive does not require that Canadians and parliamentarians be given access to strategic environmental assessments. There are three main reasons for enhancing the transparency of the strategic environmental assessments that are undertaken.

- First, the more transparent information is, the better its quality becomes. Greater scrutiny generated by public exposure can prompt greater care in the preparation of the information.
- Second, if the assessments are made available publicly, Parliament and the public have additional information for an informed debate on the potential impacts of policies, programs, and plans.
- Third, such disclosure provides assurance that the key options have been considered and potential impacts mitigated—essentially holding each department to account for the adequacy of the analysis undertaken.

4.68 To date, only a few strategic environmental assessments under the directive have been made public, and no public registry exists. These include the assessments that were prepared for the G8 Summit and the World Trade Organization's Doha Round of Negotiations (Exhibit 4.10). The Safety Net Review, which was prepared under the *Farm Income Protection Act*, has also been made public. The Standing Committee on Environment and Sustainable Development came to similar conclusions in its 2003 Report. It noted that it had "difficulty assessing the current level of compliance with the revised 1999 Cabinet directive given that virtually no information about strategic environmental assessments is publicly available."

4.69 This is in sharp contrast with the *Canadian Environmental Assessment Act* and its public registry of project-level environmental assessments, which have been carried out. It is also in contrast with the process for the Regulatory Impact Analysis Statement for new regulations, which gives parliamentarians and Canadians the opportunity to review the analysis and comment on it.

Exhibit 4.10 **Making strategic environmental assessments public: The World Trade Organization's Doha Round of Negotiations**

The World Trade Organization's Doha Round of multilateral trade negotiations was launched in 2001 and covers seven areas of negotiation, of which the agriculture negotiations are a central component. The Department of Foreign Affairs and International Trade completed the Initial Environmental Assessment of these negotiations in November 2002. The Initial Environmental Assessment applied the Government of Canada's Framework for Conducting Environmental Assessments of Trade Agreements, which identifies transparency and public consultations as key aspects of the assessment process. It did this, for example, by publishing a Notice of Intent to conduct a strategic environmental assessment in the Canada Gazette, and by posting the assessment on the Department's Web site.

Agriculture and Agri-Food Canada was responsible for analysis on the agricultural section of the environmental assessment. The team tasked with the analysis sought and received feedback from other experts within the Department at several points in the process. The Department then submitted its analysis to the Department of Foreign Affairs and International Trade, to be included with inputs from other departments. An interdepartmental committee then reviewed the strategic environmental assessment, seeking clarifications and challenging assumptions. The peer review approach gave the authors feedback on how to improve their analysis and how it was presented.

4.70 Effective 1 January 2004, the 1999 Cabinet directive was modified to include a requirement that "departments and agencies shall prepare a public statement of environmental effects when a detailed assessment of environmental effects has been conducted through a strategic environmental assessment." The intent is to "assure stakeholders and the public that environmental factors have been appropriately considered when decisions are made."

4.71 This modification reintroduces an element of the original 1990 Cabinet directive and associated guidelines, which was removed when the directive was revised in 1999. It is too early to tell how it will be implemented. However, the directive's guidelines do not provide any specifics as to what should be included in a public statement. As well, the public statement is not required for key policies, programs, and plans that did not require a strategic environmental assessment. There is no requirement for a rationale to be provided when no assessment is required. Lastly, it does not specify how these public statements will be made public.

4.72 **Recommendation.** The Canadian Environmental Assessment Agency should develop and implement an easily accessible public registry of public statements on strategic environmental assessments. Departments and agencies would retain responsibility for the quality, timeliness, and accuracy of posted information. This registry should provide the following information:

- A list of major approved government policies, programs, and plans where preliminary assessments determined that no strategic environmental assessment was required, along with the rationale for why no assessment was conducted.
- Key information on strategic environmental assessments for which consultations on an initiative are ongoing or which have been approved

by ministers or the Cabinet. This information would include key environmental impacts identified, a summary of the results of analyses undertaken, the results of any consultations, and whether any follow-up is required—elements which are identified in the directive's guidelines. In addition, the registry should include all strategic environmental assessments that are publicly released.

Government's response. As noted in the Commissioner's Report, the directive was amended in January 2004 to provide for improved transparency, focusing on improved transparency for those initiatives likely to be of greatest concern to the public.

Federal departments and agencies, under the leadership of the Canadian Environmental Assessment Agency, will work over the coming year to ensure that public statements of environmental effects are easily and centrally accessible. The effectiveness of the requirement for public statements will be assessed as part of the evaluation (Recommendation 4.66) to be completed by 2008.

Timeline for completion of action(s):

- Guidance on Public Statements (Canadian Environmental Assessment Agency)—November 2004
- Terms of Reference for Working Group to examine options for access to public statements—December 2004
- Draft report on options for access to public statements—March 2005
- Implementation of options for access—September 2005
- Evaluation of public statement requirement—December 2008

Directive guidance is incomplete

4.73 The current guidance is incomplete and leaves unclear a number of issues that need to be considered. We expect that these issues will be considered in the evaluation we recommended (see paragraph 4.66).

4.74 The directive's guidelines are advisory, and some departments are treating them as voluntary. When Cabinet authorized the directive it also authorized the accompanying guidelines.

4.75 While good practice requires that management systems be set up, the directive's guidelines do not have a specific requirement that departments and agencies set up the management systems needed to implement the directive. As noted earlier, only some departments have most of the basic systems in place.

4.76 During the course of the audit we heard from some departments that everything they do is sustainable development and that analysts are normally taking the environment into account when developing policy proposals. Unfortunately, some departments could not credibly demonstrate that they are prepared to and actually are applying the directive. Without a systematic approach, departments may be missing opportunities to identify and enhance positive impacts and options and to mitigate negative environmental impacts.

4.77 **Directive's application not defined by some departments.** The directive indicates that it applies to policies, plans, and programs that may have important environmental effects. Some departments, like Industry Canada, have determined what types of initiatives could potentially require a strategic environmental assessment. Some departments have not clarified which of their initiatives normally would require a strategic environmental assessment.

4.78 **A number of situations fall outside of the directive.** In conducting the audit, we were struck by a number of situations that seemed to fall outside of the directive itself, but that could have environmental impacts, both positive and negative, depending on the circumstance.

4.79 Some initiatives can be years or even decades old, and have undergone significant modification. The directive leaves it unclear how such initiatives are assessed.

4.80 As indicated previously (paragraph 4.57), the directive's guidelines require a strategic environmental assessment to be conducted at only one stage of the government's consideration of the issue. A memorandum to Cabinet, that is, a proposal seeking Cabinet approval, may be followed by one or more submissions to the Treasury Board requesting funding. Between the two, a number of things might occur: changes to the proposal may have been made, updated information may be available to inform the analysis, or the funding allocation may have changed. The directive is unclear how these changes should be addressed within the proposals that are put forward and their accompanying strategic environmental assessments.

4.81 **The case of the federal Budget—who assesses it?** A federal Budget is a compendium of existing and new initiatives. Finance Canada indicated that the Budget does not need to be assessed under the directive because individual items are either continuing elements not subject to the directive or are new and should have been assessed by the departments and agencies responsible for those items. With the limited number of strategic environmental assessments conducted and the performance gap in implementing the directive, it is doubtful whether the potential environmental impacts are fully assessed when a federal Budget is constructed.

More training capacity is needed

4.82 At a technical level, some departments have developed good guidance and training to support their strategic environmental assessment efforts (for example, Industry Canada, Department of Foreign Affairs and International Trade, Environment Canada, and Transport Canada). Other departments and agencies have a more limited approach (for example, Finance Canada, Health Canada, Canadian International Development Agency, and Fisheries and Oceans Canada).

4.83 Training and guidance are needed to make managers and policy analysts aware of their responsibilities under the directive and to give them the knowledge and skills necessary to conduct strategic environmental assessments.

4.84 Since strategic environmental assessment is a key federal component of the policy development process, we would expect that the Canadian Centre for Management Development (the federal government's key training organization for senior managers and now incorporated into the Canada School of Public Service), would have reflected the directive in its policy courses. To date, the strategic environmental assessment is not reflected in the policy courses offered at the Centre, nor has the Centre assessed how the Cabinet directive could impact its curriculum.

4.85 **Recommendation.** The Canada School of Public Service should assess how the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals could be referenced in the courses it offers to senior managers in the federal public service. At the very least, all policy courses should refer to the directive.

Government's response. The Canada School of Public Service (which includes the former Canadian Centre for Management Development) has completed a preliminary assessment, which shows that the directive may be referenced in about 11 courses—including 6 policy courses—in the curricula of the School's Leadership, Public Administration and Professional Development Centres.

The courses are the following: From Modern Comptrollership to the Management Accountability Framework, Integrated Risk Management, Challenges of Public Policy Development: An Overview, Leading Policy, Orientation to Public Policy Development, Orientation to Public Policy Implementation, Public Policy Development—Intermediate Level, Public Policy Implementation—Intermediate Level, Green Procurement: A Sustainable Development Approach, Disposal of Surplus Moveable Crown Assets and Investment Recovery, and Procurement and Material Policy Framework.

Following a final assessment to be done this autumn of how the directive can be referenced or otherwise dealt with in the candidate courses, changes will be made to either content and/or materials to ensure the directive is referenced or dealt with in the fiscal year 2004–05 in up to 11 candidate courses. In some courses such changes, though thought to be relatively low cost, may be subject to the availability of funds.

The adequacy of this approach will be assessed.

Timeline for completion of action(s): March 2005

Conclusion

4.86 It has been 14 years since the first directive was issued by the Cabinet. The results of our audit, taken together, suggest that most departments have not made serious efforts to apply the directive. There are still significant gaps in its application, and some departments just began to implement elements of a management system during the course of our audit. Only one of the three departments we assessed has achieved satisfactory progress in meeting its sustainable development strategy commitments concerning strategic environmental assessment.

4.87 A limited number of strategic environmental assessments have been conducted in three departments we examined in detail (Agriculture and Agri-Food Canada, Industry Canada, and Transport Canada), and none has covered all of the key elements we had expected to see in an assessment. In addition, none of these departments could show that they had screened all proposals that had been put forward to ministers or the Cabinet to see whether they warranted a strategic environmental assessment.

4.88 Currently the directive's application does not provide assurance that environmental issues are assessed systematically. Ministers and the Cabinet may not receive sufficient information to make informed decisions on proposed policies, programs, and plans. If there are potential important environmental effects, the directive is quite clear that departments and agencies are expected to apply it to initiatives that are bound for the Cabinet or that require ministerial approval.

4.89 The main reasons for this uneven application are insufficient senior management commitment to the directive, lack of central ownership and support, limited integration into decision making and assessment of impact, lack of transparency in the directive's application, incomplete guidance, and mixed availability of training.

4.90 No department or agency in particular has been tasked with the responsibility and authority for the overall monitoring of compliance with the Cabinet directive. Nor has a department or agency been tasked with the responsibility and authority for quality assessment and continuous improvement of the assessment process.

4.91 However, we observed that senior management in some departments (Transport Canada, Industry Canada, Natural Resources Canada, and the Department of Foreign Affairs and International Trade) have made firm commitments to implement the directive. Some departments have made clear progress in implementing the directive since the 1999 edition. We observed some examples of good practices that other departments and agencies could use to improve their practices and implement required systems.

4.92 Deputy heads of all departments and agencies need to ensure that their organizations are implementing the Cabinet directive. They also need to ensure that their departments and agencies have a management system in place for the proper application of the directive. In addition, the current system needs to be strengthened so a department or agency has the responsibility and authority for monitoring compliance with the directive and for ensuring that adequate quality control of the assessments is undertaken.

4.93 These and other concerns reported in this chapter need to be dealt with before ministers and the Cabinet can be assured that they are receiving sufficient information to make informed decisions. If improvements cannot be demonstrated within several years, a statutory requirement for strategic environmental assessment, as is the case with the environmental assessments of projects, may need to be considered by the Government of Canada.

About the Audit

Objectives

1. To determine whether the federal government is applying the 1999 Cabinet Directive on the Environmental Assessment of Policies, Plans and Programs (that is, strategic environmental assessment)

   Sub-objectives:

   1.1 To assess whether selected federal departments and agencies are prepared to address the requirements for a strategic environmental assessment within their organizations.

   1.2 To assess whether selected federal departments and agencies are managing key aspects of the strategic environmental assessment process.

   1.3 To assess whether selected federal departments and agencies are conducting strategic environmental assessments when required.

   1.4 To assess whether government-wide strategic environmental assessment roles and responsibilities are defined and followed by four central organizations of the federal government.

2. To assess the progress made by selected federal government departments and agencies towards specific sustainable development commitments on strategic environmental assessment related to, and in the context of, their sustainable development strategies.

Scope and approach

While the 1999 Cabinet directive applies to all departments and agencies, the audit focussed on 12 entities with a variety of mandates within the economic, social, and environmental spheres. We also looked at the roles and responsibilities of four central federal organizations. The results of our preliminary audit work informed the selection of departments and agencies to be audited. They were also selected to provide the audit with breadth and depth in its overall assessment of the federal government's application of the directive.

We assessed 12 departments and agencies to see if they were prepared to address the directive in their organizations through the design of key management system elements relating to accountability, tracking, guidance, and training. Subsequently, six of these departments were chosen to be evaluated as to whether they are making progress in implementing the necessary systems required to manage their assessment work. Lastly, three departments were assessed to determine if they were undertaking assessments when required. These departments were chosen based on our preliminary audit work, which indicated that their management systems were sufficiently developed for this audit work to take place.

The 12 departments and agencies and corresponding audit objectives they were assessed against are identified in Table 1. Each of the audit objectives also had a series of criteria against which performance was evaluated, and these are identified in Table 2.

During the course of the audit, we identified selected examples of good practices of strategic environmental assessment to highlight potential areas of practice improvement among departments and agencies.

In December 2003, the government announced a major reorganization of some departments and agencies.

- The international trade services operations of the Department of Foreign Affairs and International Trade were transferred to the newly created International Trade Canada. The remaining organization operates as Foreign Affairs Canada. The results of the audit are reported against the Department of Foreign Affairs and International Trade and not against the two new departments.
- The Canadian Centre for Management Development was incorporated, along with Training and Development Canada and Language Training Canada, into the Canada School of Public Service on 1 April 2004.

- The 1999 Cabinet directive was revised on 1 January 2004. Performance against the new requirement for preparing a public statement of environmental effects was not evaluated in this audit.

Some quantitative information in this chapter is based on data drawn from various federal and other sources. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data have not been audited, unless otherwise indicated in the chapter.

Table 1—Departmental and agency coverage by audit objectives

Federal department or agency	Audit objectives				
	1.1	1.2	1.3	1.4	2
Agriculture and Agri-Food Canada	■	■	■	☐	■
Canadian International Development Agency	■	☐	☐	☐	☐
Citizenship and Immigration Canada	■	☐	☐	☐	☐
Department of Foreign Affairs and International Trade*	■	■	☐	☐	☐
Environment Canada	■	☐	☐	☐	☐
Finance Canada	■	☐	☐	☐	☐
Fisheries and Oceans Canada	■	■	☐	☐	☐
Health Canada	■	☐	☐	☐	☐
Industry Canada	■	■	■	☐	■
Natural Resources Canada	■	■	☐	☐	☐
Public Works and Government Services Canada	■	☐	☐	☐	☐
Transport Canada	■	■	■	☐	☐
Central organizations					
Canadian Centre for Management Development	☐	☐	☐	■	☐
Canadian Environmental Assessment Agency	☐	☐	☐	■	☐
Privy Council Office	☐	☐	☐	■	☐
Treasury Board Secretariat	☐	☐	☐	■	■

■ Assessed against objective ☐ Not assessed against objective

*The Department of Foreign Affairs and International Trade has two processes in place for conducting strategic environmental assessments—one for trade negotiations and one for policies, programs, and plans unrelated to trade negotiations. This audit focussed its assessment on the Department of Foreign Affairs and International Trade's non-trade processes. However, best practices from the trade negotiations process are used to illustrate the audit.

Table 2–Criteria we audited

Audit objective	Criteria
1.1	• We expect federal departments and agencies to demonstrate: documented internal accountabilities; documented internal procedures to identify and track initiatives potentially requiring a strategic environmental assessment; and documentation on their training, guidance, and tools used for this type of assessment.
1.2	• We expect federal departments and agencies to implement a clear internal accountability (roles and responsibilities) structure for the strategic environmental assessment process. • We expect federal departments and agencies to implement an internal procedure to identify and track initiatives potentially requiring an strategic environmental assessment. • We expect federal departments and agencies to implement customized training, guidance, and tools for strategic environmental assessments. • We expect federal departments and agencies to have verified (i) the effectiveness of their internal management system for implementing the strategic environmental assessment process and (ii) the impact of this process.
1.3	• We expect federal departments and agencies to conduct and document a strategic environmental assessment for each initiative requiring one. • We expect federal departments and agencies to conduct and document consultations related to strategic environmental assessments, as appropriate. • We expect federal departments and agencies to conduct and document follow-up work related to strategic environmental assessments, as appropriate. • We expect federal departments and agencies to verify the quality of the strategic environmental assessments they conduct.
1.4	• We expect the respective roles and responsibilities of the Privy Council Office and Treasury Board Secretariat, if any, in implementing the requirements for strategic environmental assessments to be clear, documented, and followed. • We expect the Canadian Centre for Management Development to have incorporated the requirements for strategic environmental assessments into its policy development curriculum. • We expect the Canadian Environmental Assessment Agency to have promoted the application of strategic environmental assessments within the federal government. • We expect the Canadian Environmental Assessment Agency to have provided guidance and training, in consultation with other departments and agencies, to improve the implementation of strategic environmental assessments.
2	• We expect departments are meeting their performance expectations on their sustainable development strategy commitments related to strategic environmental assessment.

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Report of the
Commissioner of the Environment and Sustainable Development
to the House of Commons—2004

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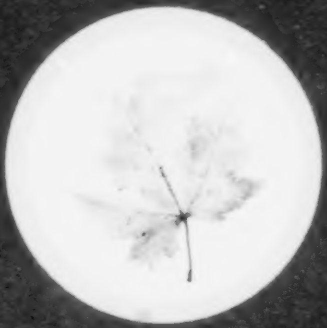
2004



Report of the
Commissioner of the Environment and Sustainable Development
to the House of Commons

Chapter 5
Fisheries and Oceans Canada—Salmon Stocks, Habitat, and Aquaculture

Office of the Auditor General of Canada

2004

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Commissioner of the Environment and Sustainable Development

to the House of Commons

Chapter 5

Fisheries and Oceans Canada—Salmon Stocks, Habitat, and Aquaculture

Office of the Auditor General of Canada

The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters, and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

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Chapter

5

Fisheries and Oceans Canada

Salmon Stocks, Habitat, and Aquaculture

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

Fisheries and Oceans Canada

Salmon Stocks, Habitat, and Aquaculture

Foreword

To Canadians, salmon represents strong and deep ties to our heritage. Salmon has sustained families and communities for generations and has contributed significantly to the economies of British Columbia and the Maritime provinces. Salmon is also a key part of the recreational sports fishing industry on both coasts. Canada is the fourth largest farmed salmon producer in the world; salmon aquaculture provides substantial economic benefits for coastal and rural communities.

In recent years, however, salmon stocks on both the east and the west coasts have been under intense pressure, and Atlantic salmon commercial fisheries in the Maritime provinces have been closed for many years to safeguard the resource. There has been considerable discussion of the effects of salmon aquaculture on wild salmon and the marine environment, including opposition to net-pen salmon farming operations from environmental groups and negative media coverage.

The Auditors General of Canada, British Columbia, and New Brunswick are tabling separate reports to their respective legislatures on salmon-related issues. Between 1997 and 2000, the Auditor General of Canada conducted three audits that focussed on Pacific salmon, and this year it completed a follow-up of these audits in collaboration with the two provincial audit offices. The Auditor General of British Columbia examined the provincial government's role in sustaining wild salmon, and the Auditor General of New Brunswick looked at salmon aquaculture in that province.

Fisheries and Oceans Canada is responsible for ensuring that salmon and their habitat are protected, and it is the lead federal agency for aquaculture development. The provincial governments in British Columbia and New Brunswick have strongly supported the development of aquaculture in their provinces. In British Columbia, various provincial departments are responsible for managing lands and natural resources in ways that sustain wild salmon.

Our three audits were performed concurrently; our offices participated jointly in certain audit-related processes and shared information on a regular basis. As a result, we were able to accomplish more with less duplication of effort and achieve a broader view and understanding of the issues.

Wild salmon and their habitat

The purpose of policy is to provide a broad framework for a shared vision to guide decisions and activities. Canada's policy on salmon and salmon aquaculture should set clear objectives for managing both wild and farmed salmon and the interactions between them. At the federal level, Fisheries and Oceans Canada has been struggling since 2000 to finalize a wild salmon policy designed to conserve the genetic diversity of wild salmon and protect their habitat. Stakeholders have called for the policy to be finalized to clarify how conservation should be implemented and how fisheries should be managed. At the provincial level, British Columbia does not have a clear vision and an overarching strategy for wild salmon sustainability.

Two of our three audits noted gaps in policy implementation. Fisheries and Oceans Canada, for example, has never reported on the status of fish habitat conservation in Canada or assessed the effectiveness of its Habitat Policy. These continue to be significant challenges for the Department. Similarly, reporting by provincial ministries and agencies in British Columbia on performance relating to sustaining wild salmon is weak.

Salmon aquaculture

All three audits identified gaps in co-ordination between the federal and provincial governments. Despite numerous committees, agreements, and protocols between the two provinces and the federal government, problems still exist. For example, there are concerns about how long it takes to secure approvals for aquaculture sites, a key aspect of regulating salmon aquaculture.

The three audits also found significant gaps in the scientific knowledge about the potential effects of salmon aquaculture. Fisheries and Oceans Canada's Aquaculture Policy Framework expresses a strong commitment to developing a sustainable aquaculture industry in Canada. But when assessing applications for aquaculture sites, the Department needs to apply more credible, science-based criteria to ensure that approved sites are properly located. It has had difficulty assessing the cumulative effects of salmon aquaculture on wild salmon stocks. And it has to determine how to control the deposit of deleterious substances by salmon aquaculture operations. Wild salmon and habitat remain susceptible to the effects of salmon aquaculture.

In New Brunswick, auditors found that stakeholders have yet to share a common vision of sustainable aquaculture. Therefore the Province lacks a comprehensive strategy for aquaculture development and the management of significant risks. In addition, there are deficiencies in both the monitoring of aquaculture activities and the enforcement of compliance. For example, the provincial government does not adequately monitor aquaculture producers' compliance with the terms of their leases and aquaculture licences. Unlike British Columbia, New Brunswick does not monitor escapes from salmon cages, nor does it require that escapes be reported.

The Salmon Aquaculture Policy Framework of the Province of British Columbia calls for relocating a number of sites that are poorly located and implementing new siting criteria, but key issues remain undecided. British Columbia's guidelines, and siting decisions made in New Brunswick, are based on scientific information that is less than complete.

Need for prompt, concerted action

Concerns about salmon and salmon aquaculture are not new, and neither are attempts to improve the state of the resource and its habitat. But progress has been slow. In the meantime, some salmon populations are in trouble, habitat loss continues to occur, and it is not known what long-term effects salmon aquaculture is likely to have on the natural resource or the environment.

Prompt, concerted action is required if the salmon fisheries and salmon aquaculture are to be sustainable. It is also imperative that more than a single level of government be involved in the solution. The collaboration of a variety of agencies within each government and between governments is essential. We urge our respective governments to take immediate action on these important issues.

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Fisheries and Oceans Canada
Salmon Stocks, Habitat, and Aquaculture

Main Points

5.1 Overall, we are not satisfied with the progress made by Fisheries and Oceans Canada in responding to the recommendations we made in the three previous audits in 1997, 1999, and 2000. While many stocks are abundant, some Atlantic and Pacific salmon stocks are in trouble. We continued to identify significant gaps in managing risks.

- The Department has not finalized the Wild Salmon Policy, which would set out clear objectives and guiding principles. The policy would also bring together biological, economic, and social factors—for fisheries and resource management, habitat protection, and salmon enhancement.
- There are shortcomings in information on salmon stocks and habitat and scientific knowledge on the potential environmental effects of salmon aquaculture in aquatic ecosystems.
- There are weaknesses in regulatory approvals, enforcement, and monitoring of salmon aquaculture operations. This includes approving aquaculture site applications, assessing cumulative effects, and monitoring salmon aquaculture operations to prevent harmful destruction of habitat.
- There has been inadequate co-ordination between federal and provincial governments in managing fish habitat, undertaking research, approving aquaculture site applications, and sharing information.

Background and other observations

5.2 Atlantic and Pacific salmon are a vital part of life on the east and west coasts of Canada. They generate a wide range of economic, social, and cultural benefits for Canadians. Maintaining biologically-diverse and abundant salmon stocks is important in preserving this unique part of Canada's heritage.

5.3 Management of the salmon resource and its fisheries is very complex. This complexity is due to several factors: the biology and behaviour of salmon; the large number of stocks; the competing demands and diverse interests of environmental organizations, First Nations, the commercial fisheries industry, the recreational communities, and other stakeholders; ongoing First Nations treaty negotiations; changing climatic and ocean conditions; and changes to wild salmon habitat. In addition, the recently enacted *Species at Risk Act* introduces new protection requirements.

5.4 Fisheries and Oceans Canada has the responsibility and legislative authority under the *Fisheries Act* to ensure that salmon and their habitat are protected. The Department is also the lead federal agency for the development of aquaculture. In British Columbia, the federal and provincial governments share responsibility for conserving and protecting wild salmon and their habitat. The federal and provincial governments also share responsibility for regulating salmon aquaculture in British Columbia and New Brunswick.

5.5 In previous years, we conducted three audits on the management of Pacific salmon. In 1997, we reported that Pacific salmon stocks and habitat were under stress. In 1999, we found that Pacific salmon fisheries were in trouble. The long-term sustainability of the fisheries was at risk because of overfishing, habitat loss, and other factors. In 2000, we reported that Fisheries and Oceans Canada was not fully meeting its legislative obligations to protect wild Pacific salmon stocks and their habitat from the effects of salmon aquaculture operations.

5.6 In 2003, we revisited the Department to assess its progress in conserving and protecting salmon stocks and their habitat, ensuring sustainable use of salmon fisheries resources, and regulating salmon aquaculture in British Columbia. We also looked at salmon aquaculture in New Brunswick as well as the current situation with Atlantic salmon stocks in the Maritime provinces.

5.7 In response to the financial pressures it faces, the Department completed a Departmental Assessment and Alignment Project to assess all its policies, programs, and activities during our audit. As well, it has been working to assess all its expenditures, to identify ways to work more efficiently, and to modernize management and financial planning processes. These activities are expected to result in a more risk-based approach to managing areas such as stock assessment, habitat, and aquaculture. We did not audit these activities.

The Department has responded. Fisheries and Oceans Canada's responses to our recommendations are included in this chapter. The Department has accepted all our recommendations and has provided individual responses. The responses include statements of actions already under way or planned to address the recommendations.

Introduction

Significance of Atlantic and Pacific salmon and salmon aquaculture in Canada

Did you know?

The seven species of North American Pacific Salmon are:

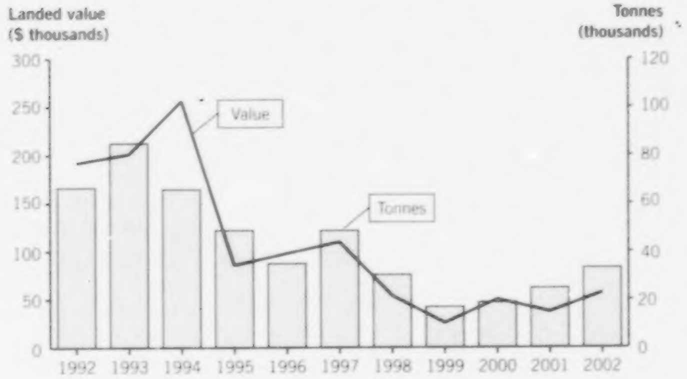
- **pink** (most abundant)
- **coho***
- **chum**
- **sockeye**
- **chinook***
- **cutthroat**
- **steelhead**

*also raised in aquaculture

5.8 Atlantic and Pacific salmon are important for Canadians. The various species of Pacific salmon have been a vital part of life on the Pacific coast of Canada, and they continue to generate a wide range of economic, social, and cultural benefits. Both Atlantic and Pacific salmon are a primary food source for First Nations people. Conserving salmon stocks and their habitat is an important step in preserving this unique part of Canada's heritage.

5.9 Pacific salmon are harvested by First Nations, commercial fishermen, and recreational anglers. Due to a variety of factors including conservation measures and declining market prices, the commercial catch of wild Pacific salmon has decreased substantially from 1992 to 2002 (Exhibit 5.1).

Exhibit 5.1 **Commercial landings of wild Pacific salmon 1992–2002**



Source: Fisheries and Oceans Canada

A First Nation fisher waits for a catch with his spear.

Source: Fisheries and Oceans Canada

5.10 There has been a significant decline in the number of wild Atlantic salmon that return to spawn in the rivers in the Maritime provinces. All commercial fisheries for wild Atlantic salmon in New Brunswick have remained closed since 1985.

A commercial fishing vessel

Source: Fisheries and Oceans Canada

5.11 Canada is the world's fourth largest salmon aquaculture producer, behind Norway, Chile, and the United Kingdom. Canada's production comes mainly from British Columbia and New Brunswick. In 2002, these two provinces produced approximately 128.8 thousand tonnes of farmed salmon, compared with approximately 29.8 thousand tonnes in 1992. There are approximately 121 salmon aquaculture sites in British Columbia and approximately 96 sites in New Brunswick. In 2002, the industry estimated that it had generated over 7,000 direct and indirect jobs in these two provinces. In British Columbia, salmon aquaculture production is dominated by farmed Atlantic salmon (approximately 85 percent); farmed Pacific salmon (chinook and coho) are also produced. In New Brunswick, only farmed Atlantic salmon are raised, predominantly in the Bay of Fundy. Most Canadian production is exported.

What we said in previous reports

Stock—populations of a salmon species that are grouped for management purposes

5.12 In the past seven years, we conducted three audits on the management of Pacific salmon. In 1997, we reported that Pacific salmon stocks and habitat were under stress. Canada's ability to sustain Pacific salmon at the existing level and diversity was questionable, given the various factors influencing salmon survival, many of which were beyond its control. While Fisheries and Oceans Canada helped build up major salmon stocks, other stocks were declining. Habitat loss may have contributed to these declines, but no overall status report from the Department was available to assess the impact of habitat loss on salmon.

5.13 In 1999, we reported that the Pacific salmon fisheries were in trouble. The long-term sustainability of the fisheries was at risk because of overfishing, habitat loss, and other factors. The result was a fisheries management crisis that had cast a cloud of uncertainty over the future of the salmon fisheries.

5.14 In 2000, we reported that the Department was not fully meeting its legislative obligations to protect wild Pacific salmon stocks and habitat from the effects of salmon aquaculture operations. We also reported that salmon aquaculture has the potential to create additional stress on wild salmon stocks over time, particularly if the industry expands.

Responsibility for conserving and protecting wild salmon and their habitat and regulating salmon aquaculture is shared

5.15 Fisheries and Oceans Canada has the responsibility and legislative authority under the *Fisheries Act* to ensure that fish and their habitat are protected. It is also the lead federal agency for aquaculture development. In 2000, the Department established the Office of Sustainable Aquaculture to increase policy and program coherence to federal aquaculture initiatives. In 2001, the Department released its second sustainable development strategy for the period 2001–03.

Anglers are part of a large group of recreational fishers.

Source: Fisheries and Oceans Canada

5.16 In British Columbia, the decision-making processes for land and water use generally fall within the mandate of the province. Since 1997, the federal government and the province have entered into agreements to deal with issues concerning Pacific salmon fisheries and to improve the co-ordination of activities to protect their habitat.

5.17 The federal government and the provinces share responsibility for regulating aquaculture operations. Under the 1988 British Columbia and 1989 New Brunswick Memoranda of Understanding on Aquaculture Development, the provinces have the primary responsibility to manage and develop the aquaculture industry in consultation with Fisheries and Oceans Canada. The Department has regulatory responsibility in some areas, including conducting environmental assessments and ensuring that all sites meet the requirements of the *Fisheries Act*. Until 28 March 2004, it also had responsibility for the *Navigable Waters Protection Act*, which has since been transferred to Transport Canada. As stated in its 1995 Federal Aquaculture Development Strategy, the Department must ensure that its activities to develop aquaculture are consistent with sustainable development.

5.18 In fact, there are many federal departments and agencies involved either directly or indirectly in aquaculture. For example, responsibility for administering section 36 of the *Fisheries Act* dealing with the deposit of a deleterious substance has been delegated to Environment Canada under a 1985 memorandum of understanding. However, the minister of Fisheries and Oceans is accountable to Parliament for all sections of the *Fisheries Act*.

Deleterious substance—any substance that would degrade or alter the quality of the water

Focus of the audit

5.19 Our follow-up focussed on the action taken by Fisheries and Oceans Canada on the key observations and recommendations in chapters 28, 20, and 30 respectively of our 1997, 1999, and 2000 reports. The objective was to determine the progress made by the Department in conserving and protecting salmon stocks and habitat, ensuring the sustainable use of the salmon fisheries resource, and regulating salmon aquaculture in British Columbia. We also looked at salmon aquaculture in New Brunswick as well as the current situation with Atlantic salmon stocks in the Maritime provinces. For more information on our audit, see **About the Audit** at the end of the chapter.

5.20 At the time of our follow-up, the Department was facing significant financial pressures. It has completed a Departmental Assessment and Alignment Project to assess all its policies, programs, and activities. It will consider options required to renew its policies and programs, strengthen management practices, and stay within existing budget levels.

Observations and Recommendations

Managing and protecting salmon resources

Wild Salmon Policy not finalized

5.21 In 1997, we recommended that the Department clarify the extent to which it intends to apply practices in sustainability and genetic diversity to the management of individual Pacific salmon stocks and their habitats. We also recommended that the Department develop more explicit operational objectives and targets for salmon stocks in its fishery management plans. In 1999, we recommended that the Department apply the precautionary approach to the management of salmon fisheries by establishing catch levels and conservation units (groupings of one or more populations).

5.22 Each of the wild Pacific salmon species is comprised of a number of separate genetic groups, each adapted to different spawning and rearing conditions. Maintaining the biodiversity and abundance of salmon stocks is important to preserving this resource.

Spawning salmon need clean water and a clean gravel bed, so that their eggs can safely grow to the alevin stage, which occurs once the eggs have hatched.

Source: Fisheries and Oceans Canada

5.23 In 2000, we reported that the Department had released the draft Wild Salmon Policy for consultation and was aiming to finalize the policy in spring

2001. The policy would provide a framework for defining conservation objectives for wild salmon. The policy would also include direction for fisheries and resource management, habitat protection, and salmon enhancement. However, the policy was not yet completed at the writing of this Report in mid–2004.

5.24 The Department now expects to finalize the Wild Salmon Policy in December 2004. It explained that additional time was necessary for extensive internal review of specific issues such as

- determining the level of genetic diversity necessary to conserve salmon,
- dealing with the implications of the new *Species at Risk Act*,
- developing an open and transparent process to consider social and economic factors in addition to biological factors, and
- completing consultations with stakeholders.

5.25 This policy is long overdue. Stakeholders have called for the policy to be finalized to clarify how conservation should be implemented and how fisheries should be managed. Decision making in the Department is hampered by uncertainty over how to measure genetic diversity and how to balance biological, social, and economic factors.

5.26 For example, the Department undertook a post-season review of the 2002 Fraser River sockeye fishery. The review identified that there were no clear objectives for the conservation of wild salmon. There was no consensus over conservation units, goals for escapement (number of fish returning to their rivers of origin to spawn), and acceptable risks for managing the fishery. We also noted that the Department's 2003 Integrated Fishery Management Plan did not include a framework to manage risks that is based on science or a detailed risk analysis of management options. Nor did the plan include socio-economic benefits or long-term goals for escapement.

5.27 At the time of this follow-up, the Department was still working on developing principles and operational guidelines on resource management, habitat management, and salmon enhancement, as well as establishing conservation units.

5.28 **Recommendation.** Fisheries and Oceans Canada should finalize the Wild Salmon Policy to define conservation objectives and provide direction for the management of fisheries, protection of habitat, and salmon enhancement.

Department's response. Fisheries and Oceans Canada is nearing completion of a draft of the Wild Salmon Policy. Following regional and national review and approval, the policy will go to consultation and final departmental approval. The policy will then be released as soon as possible.

A number of salmon populations are in trouble

5.29 Although there are indications of good returns of certain Pacific salmon stocks to waters in some geographical areas of British Columbia in 2003, a number of Pacific and Atlantic salmon populations remain a conservation concern. There are concerns that the biodiversity of salmon is at risk. Meanwhile, there is a lack of comprehensive information, which prevents a complete assessment of the status of Pacific salmon stocks.

5.30 Some wild Pacific salmon stocks are in trouble. For example, the Committee on the Status of Endangered Wildlife in Canada designated the interior Thompson River coho as endangered in May 2002. In October 2002, the Committee designated the Cultus Lake and Sakinaw Lake sockeye as endangered in an emergency assessment and in May 2003 confirmed their status.

5.31 On the east coast of Canada, we have seen a long, steady decline of Atlantic salmon stocks over a 20 to 25 year period. Acid rain, habitat loss, at-sea mortalities, and overfishing have contributed to this decline. The persistent failure of wild salmon stocks to achieve the Department's conservation targets in many areas of the Maritimes resulted in the closure of Atlantic salmon commercial fisheries about 20 years ago. In particular, the inner Bay of Fundy populations are in a critical state (the estimated number of wild adult Atlantic salmon in the 33 rivers of the inner Bay of Fundy in 2003 was less than 200); in 2001, they were all designated as endangered. They are now listed in the *Species at Risk Act*. The Department has completed a recovery strategy for these populations, but their recovery is not anticipated before 2015.

Did you know?

Number of rivers with reported Atlantic salmon in the Maritime provinces: **more than 150**

Prompt action is required to protect weak wild salmon populations

5.32 In 1999, we recommended that the Department build adequate safeguards into fishery management plans to protect stocks at risk and ensure these plans include formal recovery plans for stocks at risk. Since our 1999 audit, the Department has undertaken a number of measures to conserve weak stocks, mostly through limiting fishing opportunities or by reducing the catch rate.

5.33 On 5 June 2003, most of the provisions in the *Species at Risk Act* came into force. The legislation requires the Department to develop and implement recovery strategies as well as action and management plans, and to identify critical habitat necessary for the survival and recovery of an aquatic species listed in the Act. As of 1 June 2004, it is an offence to kill, harass, harm, or capture a listed species.

5.34 Environment Canada is the lead department for the *Species at Risk Act*. When the federal government receives an assessment of the status of a wildlife species from the Committee on the Status of Endangered Wildlife in Canada, the minister of the Environment must include a report in the *Species at Risk Act* Public Registry within 90 days. This report, called a response statement, describes how the minister intends to respond to the assessment and also provides time lines for action. Within nine months of receiving the assessment, the Governor in Council may accept the assessment and add the species to the List of Wildlife Species at Risk in the Act, reject it, or send it back to the Committee for clarification or more information.

5.35 While the Committee designated the Cultus Lake and Sakinaw Lake sockeye as endangered in October 2002 and confirmed their status in May 2003, the minister of the Environment officially received the assessments and included them in the Public Registry only in January 2004. The minister released the response statements for these stocks in April 2004. On 21 April 2004, the Governor in Council issued an order acknowledging receipt of the assessments; a decision about whether or not to list the species in the Act is expected within nine months of that date.

5.36 Meanwhile, these stocks are at very depressed levels. For example, the average number of Sakinaw sockeye returning to spawn from 1997 to 2002 was about 80. As a result, the population is at a high risk of extinction and is also vulnerable to poachers, predators, habitat loss, low water levels, and, even to a limited extent, fishing. Lack of prompt action may push these stocks even closer to extinction.

5.37 While three Pacific salmon populations have been designated as endangered, it is expected that other salmon populations will also be similarly designated. The Department must take action in a timely manner to avoid the need for the designation or listing of more salmon populations as endangered. It is important that fisheries management plans include formal plans and measures to protect weak salmon populations. It is also important that the Department's Wild Salmon Policy operate in a manner that is compatible with the *Species at Risk Act*.

The role of hatcheries in the enhancement of salmon is still being questioned

5.38 The Salmonid Enhancement Program is a key program in the Department's Pacific Region with expenditures of approximately $25 million in 2003–04, including about $17 million for hatcheries. The Department delivers this program in collaboration with some 10,000 volunteers and stream keepers. The program provides for habitat restoration, education, public information, First Nations involvement, and research related to enhancement.

5.39 Within the Pacific program, salmon hatcheries are a major activity; these projects release approximately 600 million juvenile salmon into the streams each year. They are released into the wild primarily to support sport and commercial fisheries. The Department estimates that hatchery-bred salmon account for about 20 percent of the total salmon catch in British Columbia.

5.40 In 1986, we raised concerns about salmon hatcheries. We recommended that Fisheries and Oceans Canada assess and report the actual costs and benefits of key components of the Salmonid Enhancement Program. Since 1977, salmon enhancement has been used to rebuild stocks to maintain and contribute to fishing opportunities. A 1994 departmental assessment found that enhancement must be reconciled with the conservation of wild salmon; in particular, wild stocks must be protected from the potentially negative effects of stocks raised in hatcheries. Since 1994,

A juvenile salmon, which was bred in a hatchery, at the fry stage

Source: Fisheries and Oceans Canada

there has been no comprehensive evaluation of the effectiveness of salmon hatcheries.

Hatchery-bred salmon—various species of Pacific salmon are raised in hatcheries. Eggs are taken from female salmon, fertilized with milt from males, and incubated under controlled conditions. Juveniles are reared in containers; they are released as fry to migrate to the ocean

5.41 Hatchery-bred salmon are different from wild salmon. According to the Department, hatchery-bred salmon can have negative effects on wild salmon. For example, salmon enhancement may, over time, erode the biological diversity of the wild salmon stocks. In fisheries with relatively large numbers of hatchery-bred salmon, there is a serious risk of over-harvesting wild salmon, as fishers cannot distinguish between the more abundant hatchery-bred salmon and the less plentiful wild salmon when fishing.

5.42 In view of the significant expenditures incurred in salmon hatcheries and their negative effects on wild salmon, we believe there is a need to evaluate the role of salmon hatchery production and its consequences on managing and conserving wild Pacific salmon. We understand that salmon enhancement, including the role of hatcheries is a key component of the Wild Salmon Policy—which has not yet been finalized.

Did you know?

Number of hatcheries in British Columbia that produce salmon: **over 120**

Main species of Pacific salmon produced in hatcheries: **coho, chinook, chum**

5.43 The salmon enhancement program on the East coast was eliminated several years ago, closing most hatcheries. However, the Department continues to fund the operation of the Mactaquac hatchery in New Brunswick as a biodiversity facility to maintain a gene pool for endangered salmon stocks. The Department also operates two hatcheries in Nova Scotia for the same purpose. It feels that the maintenance of inner Bay of Fundy salmon in these facilities will be key to recovery plans.

Allocation and consultation issues remain in salmon fisheries

5.44 In addition to the lack of a finalized Wild Salmon Policy, allocation and consultation problems remain in Pacific salmon fisheries. The issue of allocating the amount of salmon that First Nations, commercial, and recreational fishers can take has been the subject of debate for a number of years. User groups have stated that decisions about allocating the amount of salmon to be caught should be more predictable. In our 1999 Report, we recommended that the Department act on its proposal to establish an independent allocation board as soon as possible.

A hatchery worker transfers salmon fry from one container to another.

Source: Fisheries and Oceans Canada

5.45 In 1999, the Department issued an allocation policy, which called for establishing an impartial board to deal with salmon allocation issues in an open and transparent manner. However, the Department did not establish an independent allocation board. As indicated earlier, the Department stated that it is undergoing a comprehensive review of its programs, services, and expenditures. The proposed board, if needed, will be considered in the context of this review.

5.46 In 1999, we recommended that the Department evaluate its consultation process, with input from stakeholders, to identify where improvements are needed before it finalizes its policy for improved decision making. Subsequently, the post-season review of the 2002 Fraser River sockeye fishery identified concerns about the transparency, participation, and timeliness of consultations on pre-season management plans and in-season decision making.

5.47 Since March 2004, the Department has approved a national Consultation Framework and Toolbox (the Toolbox provides a description of the consultation process, tools and templates, and references and resources), and adopted a policy to govern advisory bodies. In the Pacific Region, the Department has also established an integrated salmon advisory process. However, the Pacific Region has only begun to implement these initiatives. It has not yet incorporated First Nations consultations into this new approach.

Information on Pacific salmon stocks and habitat

Significant deficiencies continue to exist with respect to information on Pacific salmon stocks and habitat

5.48 In previous reports, we found that the Department's information on Pacific salmon stocks and habitat was incomplete. The limited information precluded a complete assessment of the status of salmon stocks. We also reported that further improvements in the databases on catch, escapement, and habitat are needed. In this audit, we continued to identity shortcomings in these areas.

5.49 We found that stock assessments have improved in quality, but they are still limited to assessing larger populations and a few populations that are weak. There are areas of the Pacific coast where information is non-existent. There are also no formal assessments for the majority of Fraser River sockeye stocks. We observed that a number of salmon stocks had not been assessed in the last three years, and the status of several of those was believed to be poor or below average. It is not realistic to assess all stocks each year, but we believe that the Department needs to ensure that it has up-to-date assessments on stocks that are below departmental targets and declining.

5.50 There are questions about the availability and quality of departmental data. For example, the post-season review of the 2002 Fraser River sockeye fishery showed that users were critical of the data available to manage the Fraser River sockeye fishery. There were concerns whether in-season estimates of abundance, migration timing and route, stock composition, and catch reporting were timely, adequate, or accurate.

5.51 Progress in improving the monitoring and catch reporting in the commercial salmon fishery has been modest. In February 2002, the Department released a Pacific Region Fishery Monitoring and Reporting Framework, which calls for developing an action plan and setting standards to improve the accuracy and timeliness of catch reporting. At the time of our follow-up, the Department was seeking input from stakeholders to develop an improved system to monitor the fishery.

5.52 There is limited information available on the status of the conditions of salmon habitat. We found very few habitat status reports that had been reviewed and published by the Department's Pacific Scientific Advice Review Committee. It provides scientific information and advice to the Department and other bodies on the status of stocks and habitat and the potential biological consequences of actions to manage the fisheries.

5.53 A recent departmental review of habitat information management found that the Department and the Province of British Columbia have made progress in improving how the information on salmon stocks and habitat is collected and managed. However, the review concluded that there are still problems in managing habitat information. For example, there continues to be no simple access for departmental managers and users to current and complete data, and a lack of key technical data for many watersheds, including limited information about small streams.

5.54 **Recommendation.** Fisheries and Oceans Canada should collect and analyze information to provide up-to-date assessments on habitat conditions and Pacific salmon stocks that are below departmental targets and declining.

Department's response. Fisheries and Oceans Canada collects habitat information in partnership with community groups, the Province of British Columbia, and industry sectors. These assessments are accessible in a variety of ways, including watershed atlases and on-line digital mapping. The assessments will continue and expand as new partnerships are developed.

Recently developed planning tools, in conjunction with the Pacific Scientific Advice Review Committee, provide a basis for the prioritization of salmon stock assessment activities, with focus on key fisheries and weaker stocks that may be at risk.

Managing and protecting salmon habitat

Departmental reviews raise questions as to whether an overall net gain of habitat is being achieved

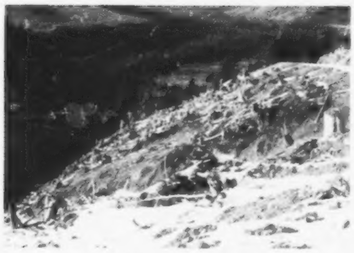
5.55 The overall objective of the Department's Policy for the Management of Fish Habitat (Habitat Policy) is to achieve an overall net gain or increase in the amount of habitat available to salmon. In 1997, we reported that habitat loss was a major problem. The Department had neither prepared an overview report on the status of fish habitat conservation in Canada, nor had it conducted a review of the effectiveness of its Habitat Policy to conserve and protect habitat since its adoption in 1986.

Did you know?

Sockeye salmon cannot be successfully moved from one lake to another when their habitat is destroyed.

5.56 In 1997, we also recommended that the Department devote more time and effort to monitor compliance (with the terms and conditions of development projects approved by the Department) and follow-up in order to assess the effects of its decisions about managing fish habitat and its performance towards the achievement of "no net loss" of habitat. In response, Fisheries and Oceans Canada undertook a number of reviews and scientific evaluations, which identified concerns about whether the guiding principle of no net loss of habitat on a project level was being achieved.

5.57 For example, in 2000, the Department reviewed the measures to restore fish habitat implemented by coastal log-handling facilities in British Columbia from 1994 to 1999. It looked at a total of 35 files and found that no net loss of habitat was achieved at only a few locations investigated. In a few cases, the review noted that it was not possible to determine whether no net loss of habitat at specific sites had been achieved, as no monitoring was done at the facilities after work had been completed. In addition, the reports on environmental assessment and monitoring, which the Department had examined, were of inconsistent quality and use, as there were no standard reporting requirements or format.



Clear-cutting of logs creates erosion, which may affect salmon spawning beds.

Source: Fisheries and Oceans Canada

Coastal log-handling activities can damage salmon habitat.

Source: Fisheries and Oceans Canada

5.58 If the Department considers that a proposed development project will result in a harmful destruction of habitat, it will only issue an authorization if compensatory habitat can be constructed by the proponent to offset the residual effects from the project. A recent departmental review of 52 authorizations and associated habitat compensation projects across Canada (including 36 in the Pacific Region) identified that many projects resulted in net losses in habitat. Most projects had either larger destruction to habitat or smaller compensation than had been authorized.

5.59 There are indications that habitat loss is continuing. As the Habitat Policy has been in effect for many years and does not seem to be working, we suggest that the Department re-examine the objectives of the policy and make it work.

Limited information to Parliament on the Department's performance in meeting the objectives of the Habitat Policy

5.60 Section 42.1 of the *Fisheries Act* requires the minister of Fisheries and Oceans to prepare and table a report, as soon as possible after the end of each fiscal year, on administering and enforcing the provisions of the Act relating to fish habitat protection and pollution prevention. We would expect the Department to submit this report in a timely manner and to provide information on achieving the objectives and goals of the Habitat Policy.

5.61 The tardiness in providing this report to Parliament has been a long-standing problem. The last report for the fiscal year ended 31 March 2002 was tabled only in February 2004. While the report describes numerous activities related to protecting habitat and enforcing the provisions of the Act, there is limited information on the extent to which the Department is achieving the objectives and goals of the Habitat Policy.

Need for a risk-based and streamlined approach

5.62 In 1997, we reported that the project referral system was the primary tool used to conserve habitat. Under the system, individuals, companies, and agencies refer projects involving land, river, and marine development projects to both the Department and the Province of British Columbia for review. This is to determine whether changes to fish habitat are likely to occur. We recommended that the Department work with the province to improve efficiencies in the referral system, subject to an appropriate accountability framework being put in place to satisfy the Department's mandate to protect fish habitat.

5.63 The Department advised us that British Columbia has withdrawn from the referral process for protecting fish habitat; the province now uses a results-based approach. The Department is concerned that the results-based approach, as set out by the province, is likely to have a significant effect on its own work. For example, the provincial government has introduced a regime for results-based forest and range practices, focussing on outcomes rather than paper review processes. The changes to the provincial forest legislation will require the Department to examine its own involvement in the review process for forest development, including acceptable streamside protection

A proposed development project has barriers at the riverbanks to prevent erosion of soil, which could be carried downstream to salmon spawning areas.

Source: Fisheries and Oceans Canada

standards and guidelines to limit logging activities beside small and feeder streams.

5.64 At the time of our audit, the Department did not have a national risk management framework to manage habitat. In the Pacific Region, the review process assumed all habitat projects are equally important or that all projects have equal impacts, rather than focussing on projects and areas that pose the greatest risk to fish habitat. We believe that the Department needs to work with the Province of British Columbia using a risk-based approach that would both complement the provincial approach and satisfy the Department's mandate for habitat management and protection.

5.65 The Department is now revamping its approach to managing fish habitat. It has recently introduced an action plan aimed at improved management of program risks, improved program coherence, increased efficiency in program delivery, and strengthened partnerships with others. A key element of the plan is developing a risk management framework for the habitat management program. This framework will involve realigning its regulatory review efforts towards those projects and areas with the greatest risk to fish habitat. Projects will be identified as low, medium or high risk to fish habitat, and the Department will develop streamlining tools with its partners.

5.66 **Recommendation.** Fisheries and Oceans Canada should co-ordinate efforts with the Province of British Columbia, using a risk-based approach that would both complement the provincial approach and satisfy its own mandate to manage and protect fish habitat.

Community volunteer assists in restoring salmon habitat.

Source: Fisheries and Oceans Canada

Department's response. As part of an overarching environmental modernization process, Fisheries and Oceans Canada is implementing a science-based risk management framework that focusses on the highest risks to fish habitat. Consultations are ongoing with provinces, territories, industry sectors, and environmental groups. In British Columbia, a working group has been exploring ways to achieve one-window service delivery for proponents. In addition, a Canada–British Columbia Committee on Regulatory Reform is conducting several pilot projects that will lead to the renewal of the Canada–British Columbia Agreement on Fish Habitat Management, signed in 2000. Fisheries and Oceans Canada has also collaborated with British Columbia in the development of its new Riparian Areas Regulation, which will come into force in 2005. It meets the requirements of the *Fisheries Act* and is intended to provide a more streamlined, results-based approach for developers in determining setback requirements.

Limited progress in improving community-based fish habitat planning

5.67 In 1997, we reported that more community involvement in planning is needed. We recommended that the Department increase its level of participation in initiatives for regional and community-based planning. Since 2001, a new process called Watershed-based Fish Sustainability Planning has been in place to help governments, First Nations, and non-government groups to contribute to conserving and recovering fish stocks and their habitat in British Columbia.

5.68 This approach that focusses on watersheds, offers the opportunity for more efficient and strategic delivery of federal-provincial responsibilities and stronger partnerships with stakeholder groups. However, a review in 2003 sponsored by the Department and the Province of British Columbia found that the new planning process has, to date, lacked the necessary direction, structure, and resources to generate effective results. In particular, it lacks a common framework for federal-provincial co-operation and community partnerships in the planning process. Key factors affecting the planning process include lack of long-term federal and provincial government commitments, inadequate departmental staff commitments, and confusion over the roles of community groups and government in the plans. A more structured approach is needed to reduce uncertainty and to more effectively plan for conserving fish in watersheds. At the time of our follow-up, the Department was considering an implementation strategy and work plan as recommended by the review.

Salmon aquaculture

The Department has put in place an aquaculture policy framework

5.69 The Department recognizes that salmon aquaculture offers large potential economic benefits for Canada, particularly for coastal and rural communities. However, salmon aquaculture poses risks to wild salmon stocks and the marine environment. These risks need to be managed because Canadians can benefit from sustainable aquaculture development.

5.70 In 2000, the Department implemented an Aquaculture Action Plan aimed at increased public confidence in the sustainability of aquaculture and to support competitiveness in international markets. This plan includes several components:

- an enabling policy environment that includes developing an aquaculture policy framework;
- the Program for Sustainable Aquaculture;
- an enabling regulatory environment;
- programs to develop the industry;
- inter-jurisdictional co-operation; and
- communications with Canadians.

5.71 The aquaculture policy framework represents a significant step forward with regard to the Department's role as the lead federal agency for aquaculture development. Through this framework, the Department is committed to being both an enabler and a regulator of aquaculture development. Among other things, it attempts to ensure that laws and regulations relating to aquaculture are clear, efficient, effective, consistently applied, and relevant to the sector. It also invests in aquaculture science, research, and development. In addition, it is committed to work with provincial governments to provide predictable, equitable, and timely access to aquaculture sites.

5.72 As a first step to clarifying its regulatory requirements, the Department has developed several interim guides to assist its officials in assessing aquaculture projects. In addition, the Department has worked with provinces to establish joint committees to review applications for salmon aquaculture sites and other issues. Despite all these efforts, the Department continues to face significant challenges in balancing its regulatory role and its enabling role. We continued to identify significant gaps in managing risks, as explained in the following sections.

Did you know?

Number of genetically modified salmon produced commercially in the aquaculture industry: **none**

Possible effects of aquaculture on ecosystems

Significant gaps continue to exist in scientific knowledge about the potential effects of salmon aquaculture

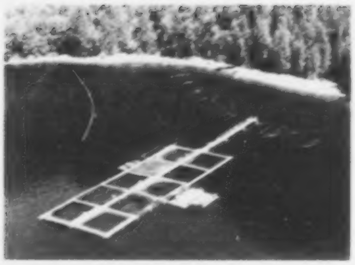
5.73 In 2000, we reported that the 1997 Salmon Aquaculture Review in British Columbia identified a wide range of research that needs to be done on salmon aquaculture and its effects on the environment in general and on wild salmon in particular. We found that the Department was not giving adequate attention to prioritizing research requirements. We recommended that the Department identify areas of needed research to understand the potential effects of an expanded salmon aquaculture industry and assign priorities to ensure the most effective use of the limited resources before new site proposals are reviewed.

A salmon aquaculture site

Source: Fisheries and Oceans Canada

5.74 Improved scientific research and better understanding of environmental effects of aquaculture are important parts of the Department's sustainable development strategy. Sound scientific information and its evaluation must be the basis for applying the precautionary approach to decision making. Under the Program for Sustainable Aquaculture, the Department has obtained an amount of $12.5 million over five years for environmental and biological science to improve the federal government's capacity to assess and reduce the potential effects of aquaculture on aquatic ecosystems. An additional amount of $20 million from the program is to be used over five years for the Aquaculture Collaborative Research and Development Program. Under this program, the Department partners with industry to fund research and development projects to enhance innovation and productivity of this industry sector.

5.75 Our current audit found that, while some research has been undertaken or is ongoing, significant gaps still exist with respect to the needed research on the potential effects of salmon aquaculture in aquatic ecosystems and on wild salmon stocks. The Department, through its state of knowledge initiative, identified significant gaps in knowledge about far-field environmental effects of finfish aquaculture and the use of chemicals on finfish aquaculture in Canada. We also observed that sufficient knowledge of the risks and potential effects of salmon aquaculture on wild salmon does not exist in several areas such as diseases, sea lice, and escapes of farmed salmon from aquaculture sites.



A salmon aquaculture site

Source: Fisheries and Oceans Canada

5.76 **Diseases.** Infectious hematopoietic necrosis is a serious disease in British Columbia. The first confirmed report of this disease in salmon aquaculture sites in the province was in 1992. Between August 2001 and May 2002, the virus infected some 19 salmon aquaculture sites.

5.77 Infectious salmon anaemia first occurred in New Brunswick aquaculture sites in 1996. In 1998, more than one million farmed salmon had to be slaughtered in an effort to control one outbreak. The disease was later found on wild Atlantic salmon in the province. In 2001, 15 aquaculture sites tested positive for this disease in the Bay of Fundy. However, little is known about the virus, including its effect on wild stocks. The issue is sensitive because the Bay of Fundy sites are close to aquaculture sites in the state of Maine; many sites there were left fallow and cleaned in response to outbreaks of the disease.

5.78 **Sea lice.** Sea lice infestation is a major concern for the aquaculture industry in British Columbia. However, the potential effect of sea lice on wild salmon stocks and its relation to salmon aquaculture operations remain unanswered. In addition, the Department does not have a long-term research plan to address this issue. In response to public concerns expressed over the low number of pink salmon returning to spawn in 2002 in the Broughton Archipelago, where many aquaculture sites are located, the Department and the Province of British Columbia announced an action plan to address the sea lice issue in February 2003. Key departmental commitments included a freshwater monitoring program, a marine monitoring program, and a long-term research plan. Monitoring began in early March and ended in June 2003.

5.79 While pink salmon were returning in good numbers throughout British Columbia in 2003, the number of pink salmon returning to the rivers flowing into the Broughton Archipelago was again poor. According to the Department, findings from the 2003 monitoring programs are that the majority of sea lice found on wild stocks are a species rarely found on salmon aquaculture sites. Furthermore, the bulk of the sea lice found had minimal effect on the host. The Department recognizes that it is difficult and scientifically indefensible to draw conclusions about the effects of sea lice or the causal links between salmon aquaculture and sea lice on wild salmon after one season of study. In May 2004, the Department announced that the next phase of the research plan in the Broughton Archipelago would begin that month. This research is intended to address the main gaps identified from the analysis of the 2003 data, focussing on the later part of the out-migration of juvenile salmon to the ocean. International experience indicates that there are different views on the link between salmon aquaculture, sea lice infestations in wild salmon, and drops in wild salmon stock levels.

5.80 **Escapes.** The aquaculture industry wants to keep all of the farmed salmon it produces and is making improvements to minimize escapes, but they occur. In the Pacific Region, the Department's Atlantic Salmon Watch Program reported that adult and juvenile Atlantic salmon were found in rivers and streams, and adult Atlantic salmon were caught in marine waters. However, it is difficult to determine exactly how many fish actually escaped from aquaculture sites, where they went, and what happened to them after they had escaped. In particular, it is difficult to identify escaped farmed Pacific salmon from these sites because they cannot be easily distinguished from wild Pacific salmon. This represents a significant limitation to assessing the effect of escapes of farmed salmon on wild salmon. There has been a decline in the number of escapes reported in the last two years; the Department attributes this to the introduction of provincial escape prevention regulations.

5.81 In New Brunswick, there is no reporting or monitoring of escapes of farmed salmon from aquaculture operations by the Department, although it is known that escaped farmed salmon have been found in some rivers. Unlike in British Columbia, there is also no requirement for salmon aquaculture operators to recover escaped farmed salmon in this province. The effect of the presence of farmed salmon escapees on wild salmon has not been adequately examined in Atlantic Canada.

Need to prioritize and co-ordinate scientific research

5.82 According to the Department, resource constraints have limited its ability to address knowledge gaps that would support decision making by its officials on key concerns regarding approvals of salmon aquaculture sites and environmental assessments. According to a recent internal report, Department officials raised concerns that the results of many scientific studies were presented only as information rather than as advice. They looked for more support from science in translating scientific information into advice and risk management/mitigation strategies that would address identified concerns. In our view, the Department needs to better align research projects to deal with priority issues when undertaking environmental and biological scientific research to provide the knowledge urgently required for decision making. We noted that the Science Branch in the Maritimes Region has worked closely with habitat management officials to provide them with scientific advice on a number of issues related to aquaculture.

5.83 We found a lack of national co-ordination on aquaculture research and development. Different jurisdictions, organizations, and programs conduct aquaculture research and development; their work may duplicate or compete with each other. It is essential that the Department work with other research-funding agencies to identify and prioritize these issues and to co-ordinate research activities.

5.84 **Recommendation.** Fisheries and Oceans Canada should set priorities and develop a long-term research plan to address knowledge gaps on the potential effects of salmon aquaculture in aquatic ecosystems and on wild salmon stocks.

Department's response. Fisheries and Oceans Canada has an active research program on both coasts evaluating environmental interactions of salmon aquaculture. The Department has undertaken a state of knowledge initiative to identify research gaps and priorities and is finalizing a state of knowledge work plan for scientific advice on the impacts of salmon aquaculture on fish habitat.

In the Pacific Region, Fisheries and Oceans Canada is working with British Columbia, industry, academics, and other stakeholders in developing a research plan to address gaps in project-environment interactions related to salmon aquaculture. This research plan should be completed by 31 March 2005.

Regulating salmon aquaculture

Difficulty in assessing the cumulative, environmental effects of salmon aquaculture operations

5.85 In 2000, we reported that the Department was unable to assess the cumulative, environmental effects of salmon aquaculture operations as required by the *Canadian Environmental Assessment Act*. While the Department has issued guides to assist its officials in considering cumulative, environmental effects relating to aquaculture projects, we found that the Department still has difficulty in assessing these effects. The Department states that it is strengthening its assessments by developing a standardized approach to reviewing these effects.

5.86 Our audit work was conducted before the responsibility for the *Navigable Waters Protection Act* was transferred to Transport Canada in March 2004. Prior to that, when Fisheries and Oceans Canada received an application for a salmon aquaculture site, it had to ensure that the site would meet the requirements under the *Fisheries Act* and the *Navigable Waters Protection Act*. Unless the project was exempted because it did not interfere substantially with navigation, the Department was required to complete an environmental assessment under the *Canadian Environmental Assessment Act* before the *Navigable Waters Protection Act* approval could be issued. The *Canadian Environmental Assessment Act* only came into effect in 1995.

5.87 In several environmental screening reports of proposed projects in British Columbia, the Department acknowledged that it needs to conduct further research on the aquaculture industry as a whole to answer many outstanding questions. More information is also needed on the transfer of diseases and parasites between wild salmon and salmon raised in aquaculture operations and on the adaptability of escaped farmed salmon to the wild, including their potential effects on the wild stocks.

5.88 In the sample of Fisheries and Oceans Canada aquaculture files that we looked at in New Brunswick, we found very little discussion about the cumulative, environmental effects in environmental screening reports.

Need for credible siting criteria to assess salmon aquaculture projects

5.89 In 2000, we reported the lack of a scientific basis for the criteria used to ensure that aquaculture sites are properly located. We also noted that the 1997 Salmon Aquaculture Review recommended that scientific studies be conducted in specific areas to provide information for developing more credible criteria. In our current audit, we found that the Department is still using the same criteria that existed at the time of the Salmon Aquaculture Review to assess salmon aquaculture projects in British Columbia.

5.90 The Department uses different criteria to assess salmon aquaculture projects in New Brunswick. For example, there are specific criteria for water depth and current. However, there are no guidelines about locating salmon aquaculture sites at a specific distance from rivers frequented by wild salmon and areas of sensitive fish habitat, wildlife, or shellfish beds in New Brunswick. In several cases, the Department approved projects situated right on top of juvenile lobster habitat or close to areas used extensively by wildlife such as endangered harlequin ducks. It believed that significant, negative effects were not likely from these projects; there are ongoing research and monitoring requirements at these sites.

5.91 Canada is a member of the North Atlantic Salmon Conservation Organization and a signatory to the Convention for the Conservation of Salmon in the North Atlantic Ocean. The convention supports general measures to minimize impacts from aquaculture activities. Such steps include locating aquaculture sites at a distance from salmon rivers. However, the Department does not apply these measures when assessing site applications in New Brunswick. As a result, Canada is not fully living up to its commitments.

Delays in completing environmental assessments

5.92 In 2000, we reported that the Province of British Columbia had put in place a moratorium on the expansion of the salmon aquaculture industry since 1995. In September 2002, British Columbia lifted the moratorium. Since then, the Department and the Province have received numerous applications for new, and renewals of, Crown land tenures and aquaculture licences and relocations. Similarly in New Brunswick, there have been a number of applications for new sites subsequent to the release of the 2000 Bay of Fundy Marine Aquaculture Site Allocation Policy by the Province. In addition, many operators are increasing their production or expanding the boundaries of existing sites, which may require federal approval under the *Navigable Waters Protection Act*.

5.93 The process of reviewing aquaculture site applications at the Department has been criticized by both industry and the provinces as being slow and inefficient. There were no established service standards to assess aquaculture projects. In many cases, information requirements and expectations were not clear; this resulted in significant delays in the site-approval process, particularly in the Pacific Region. There were also overlapping areas and duplication between the work done by the provincial ministries and Fisheries and Oceans Canada. In some cases, the province had issued licences to the proponents long before environmental assessments were completed by Fisheries and Oceans Canada. The Department states that, in 2004, it has worked with the provinces to improve the review times of aquaculture site applications.

5.94 We identified problems in how Fisheries and Oceans Canada applied the *Navigable Waters Protection Act* to aquaculture sites. The Act requires federal approval to construct any work in navigable waters. This requirement does not apply if the site does not interfere substantially with navigation. In the case of an exemption, an environmental assessment is not triggered. Approximately 80 salmon aquaculture sites in New Brunswick had been given exemptions in the past; thus, many of them have never been subject to an environmental assessment. In addition, many exemptions included requirements to implement safety measures. However, the Department later found that these requirements constituted a condition of approval that should not have been applied to these exempted sites. We also found several cases where operators had placed net pens in the water without having obtained prior approval from Fisheries and Oceans Canada as required by the *Navigable Waters Protection Act*. The Department noted that these sites were placed in the water illegally. The operators were required to obtain a retroactive approval from the Department and to mark the sites according to *Navigable Waters Protection Act* guidelines.

Better monitoring is required to prevent harmful destruction of habitat

5.95 In 2000, we reported the lack of monitoring of sensitive coastal habitat adjacent to aquaculture sites and no regular monitoring of wild salmon stocks adjacent to these sites in British Columbia. We recommended that the Department act immediately to strengthen its monitoring and enforcement capabilities for salmon aquaculture operations.

5.96 During our current audit, we observed that in some cases the Department had entered into an agreement to require the operator to monitor and reduce the potential effects of an approved site. Nevertheless, the Department requires significant resources and effort to monitor the situation adequately. In one case in New Brunswick, we observed that the Department and others periodically monitored the effects of a salmon aquaculture site on nearby lobster habitat. However, in two other cases in New Brunswick, we did not find any monitoring information from the operator in the files, although the Department had required the operator to provide annual monitoring reports.

5.97 Salmon aquaculture operators in New Brunswick are required to report diseases, monitor and test the condition of the sea floor under the net pens, and report the results to the Province. This includes information on pesticide and antibiotic applications and other operational information. The Province provides information on the operations to the Department, but the information is only in summary form. Without sufficient operational information for each site, it is difficult for the Department to determine the actual effects of salmon aquaculture operations on fish habitat.

5.98 We would expect regular monitoring of sensitive habitats adjacent to aquaculture sites to prevent the harmful destruction of the habitat and to allow the Department to take enforcement action where appropriate. However, in the case study described below, there was a situation in British Columbia where the Department identified that a harmful alteration, disruption, or destruction of habitat had occurred. It did not take any enforcement action but granted a ministerial authorization for the destruction of the habitat and approved a plan proposed by the operator to remediate the situation.

Lack of progress to deal with the deposit of deleterious substances

5.99 In 2000, we recommended that Fisheries and Oceans Canada take immediate action to determine how the "deposit of a deleterious substance" would be addressed. In response, the Department indicated that it would

Lack of monitoring to prevent a harmful alteration, disruption, or destruction of habitat from salmon aquaculture operations

In November 2000, British Columbia referred an application to renew the tenure of a salmon aquaculture site to Fisheries and Oceans Canada for review. The Department was required to conduct an environmental assessment of the site.

Earlier in the summer of 2000, provincial officials had identified environmental concerns with the salmon aquaculture site. An initial environmental screening completed by the Department in June 2001 concluded that the existing site was causing significant adverse environmental effects. There was a significant build-up of organic waste material on the ocean bottom beside the facility. The sediment was black, sludge-like, and had a strong sulphide smell; there was a layer of fish feed found on top of the sediment.

In January 2002, the Department notified the operator of the site that a harmful alteration, disruption, or destruction of habitat had occurred, in violation of section 35(1) of the *Fisheries Act*. However, it did not take any enforcement action. In October 2003, it granted a ministerial authorization for the destruction of habitat under section 35(2) of the Act and accepted a remediation plan proposed by the operator.

Source: Fisheries and Oceans Canada

consider, in collaboration with Environment Canada, the development of regulations under section 36 of the *Fisheries Act* to control the deposit of deleterious substances from aquaculture operations.

5.100 In 2004, Fisheries and Oceans Canada advised us that it believes that a section 36 regulation for salmon aquaculture operations is not warranted. The Department is of the view that industry efforts to develop codes of practice for waste management are the best means of achieving environmental protection from potential deleterious substances. Further, the two departments will continue to monitor and research the patterns of use and the toxicity of chemicals in aquaculture that would support future development of regulations or other management options as warranted.

5.101 **Recommendation.** Fisheries and Oceans Canada should, in collaboration with the provinces, assess and monitor salmon aquaculture operations to prevent harmful effects on wild stocks and habitat. It should, in consultation with Environment Canada, continue to determine how the deposit of deleterious substances from aquaculture operations will be controlled, monitored, and enforced.

Department's response. With British Columbia, Fisheries and Oceans Canada has developed a harmonized approach to manage effects on fish and fish habitat. These arrangements are being formalized through letters of understanding, which will be signed by March 2005.

On the East coast, Fisheries and Oceans Canada participates through a series of federal-provincial committees to avoid and mitigate aquaculture-related fish habitat impacts, for example, as outlined in environmental management plans.

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Department's response. [illegible]

[illegible]

Fisheries and Oceans Canada and Environment Canada are continuing to evaluate and improve management practices for deleterious substances related to aquaculture operations.

Need for an operational, national, aquatic-animal health program

5.102 Disease outbreaks and sea lice infestations in salmon aquaculture operations have indicated the need for a national, aquatic-animal health program—a partnership of federal-provincial-territorial governments and industry stakeholders. The establishment of such a program is regarded by the Department and industry as essential for both fish health in aquaculture and for the protection of wild stocks. It is also needed for trade purposes because many countries expect Canadian exports of aquatic animal products to meet international standards, particularly that of the International Aquatic Animal Health Code established by the World Organisation for Animal Health.

5.103 In 2001, the Department obtained Cabinet approval in principle to establish the National Aquatic Animal Health Program, but it has not received any federal funding. To date, the program is not yet operational.

Conclusion

5.104 Overall, we found the progress made by Fisheries and Oceans Canada in response to our observations and recommendations made in 1997, 1999, and 2000 to be slow. In particular, key steps to protect and manage Pacific salmon are yet to be completed.

5.105 Management of the salmon resource and related fisheries is very complex. Meanwhile, there are concerns that the biodiversity of salmon is at risk, and some salmon populations are in trouble. We found that the Department has made little progress in applying practices in sustainability and genetic diversity to conserve Pacific salmon. It has not yet finalized the Wild Salmon Policy to provide clear objectives and guiding principles and to bring together biological, economic, and social factors for fisheries and resource management; habitat protection; and salmon enhancement. The role of hatcheries in relation to wild salmon needs to be clarified. Consultation and allocation issues remain in Pacific salmon fisheries. Shortcomings continue to exist in information on salmon stocks and habitat.

5.106 The Department has only recently developed a risk management framework for the habitat management program. Departmental reviews raise questions as to whether an overall net gain in the productive capacity of habitat is being achieved; it needs to re-examine the objectives of its Habitat Policy and make it work. The Department also needs to work with the Province of British Columbia and use a risk-based approach that would both complement the provincial approach and satisfy its mandate to manage and protect habitat. We observed limited progress in improving fish habitat planning that is community-based.

5.107 We continued to identify gaps in managing risks to salmon aquaculture. There are significant knowledge gaps with respect to the potential effects of salmon aquaculture on wild stocks and the environment. The Department needs to better align research projects to deal with priority issues to serve the urgent needs required for decision making. We identified problems in how Fisheries and Oceans Canada applied the *Navigable Waters Protection Act* to salmon aquaculture sites, (in March 2004, the responsibility for this legislation was transferred to Transport Canada). Fisheries and Oceans Canada continues to have difficulty in assessing the cumulative environmental effects of salmon aquaculture operations. There is a need for credible criteria to assess salmon aquaculture projects. In addition, there is a lack of progress to deal with the deposit of deleterious substances from these operations. These weaknesses place the Department at risk in terms of inadequate protection of wild salmon and fish habitat. It needs to strengthen its monitoring and enforcement capabilities to ensure that salmon aquaculture is being regulated and developed in a sustainable manner.

5.108 Salmon are important to Canadians, generating a wide range of economic, social, and cultural benefits. Maintaining biologically-diverse and abundant salmon stocks is essential in preserving this unique part of Canada's heritage. Lack of prompt action may put weak salmon stocks and the long-term sustainability of fisheries at risk. Fisheries and Oceans Canada needs to establish a comprehensive plan of action, setting out the priorities, key steps, and time frames to address issues related to the conservation and protection of wild salmon, habitat, and salmon aquaculture.

Department's response. Since the late 1990s, Fisheries and Oceans Canada has made important changes in its approach to fisheries management. Although the Wild Salmon Policy has not been finalized, the Department has made significant progress on implementation of precautionary salmon management, which protects weak stocks. For example, the introduction of the coho recovery plan in 1998 brought exploitation rates on weaker coho stocks to record low levels. Greatly reduced exploitation rates were also introduced for salmon stocks of concern, in particular, weak sockeye stocks throughout the coast, as well as chinook stocks on large areas of the coast. In virtually all salmon fisheries in British Columbia, exploitation rates are dramatically lower than a decade ago. While there have been important conservation successes, the cost to industry has been high, and as a result, the Department has come under continued pressure to relax conservation measures. It should also be noted that integrated fisheries management plans clearly state conservation objectives for each species. The Wild Salmon Policy will provide a cohesive package of each of these conservation objectives.

About the Audit

Objectives

The objectives of this follow-up audit were to determine the progress made by Fisheries and Oceans Canada in conserving and protecting salmon stocks and habitat, ensuring the sustainable use of the salmon fisheries resource, and regulating salmon aquaculture.

Scope and approach

The follow-up focussed on the action taken by Fisheries and Oceans Canada on the key observations and recommendations in the three chapters on Pacific salmon reported in 1997, 1999, and 2000. We also looked at salmon aquaculture in New Brunswick as well as the Atlantic salmon stock situation in the Maritime provinces. In addition, we followed up on specific issues and recommendations related to salmon management raised in Chapter 10 of our 1986 Report, Fisheries and Oceans Canada—Pacific and Freshwater Fisheries.

Our follow-up focussed on programs and activities at Fisheries and Oceans Canada. It does not deal with shellfish or other finfish aquaculture. We also excluded from our examination the Pacific Fisheries Adjustment and Restructuring Program, which ended in March 2003. The scope of the audit did not include issues related to food safety or federal support programs delivered by other federal agencies. We did not examine activities at the provincial level that are reviewed by the offices of the auditors general of British Columbia and New Brunswick in their respective provinces. We worked in collaboration with the two provincial auditor general offices in conducting the audit work but did not look at their files.

During the audit, we met or had meetings or discussions with departmental staff at headquarters in Ottawa, in the regional offices in Vancouver, Halifax, and Moncton, as well as in area offices and research facilities. We also had discussions with selected stakeholders such as commercial and sport fishery associations, non-government environmental organizations, and associations in the salmon aquaculture industry. We reviewed Fisheries and Oceans Canada's files and documentation. A large amount of material was obtained through the review of external and internal reports and from government and other Web sites.

Some quantitative information in this chapter is based on data drawn from various federal and other sources. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data have not been audited unless otherwise indicated in the chapter.

Criteria

We expected that Fisheries and Oceans Canada would have made satisfactory progress in implementing our recommendations. We expected the Department would

- have adequate databases on fish habitat and stock assessment, which would be accessible to, and used by, decision makers;
- apply the *Fisheries Act* and specifically the Policy for the Management of Fish Habitat to achieve the stated goal of net gain, first, by applying the guiding principle of no net loss and, second, by enhancing habitat where feasible;
- have established a salmon policy that sets out clear conservation objectives including direction for resource management, habitat protection, enhancement, and aquaculture;
- have entered into partnerships wherever and whenever possible to improve its efforts to protect fish habitat and enhance fish production in areas outside its jurisdiction and to maximize benefits from resources at its disposal;
- have adopted an appropriate sustainable approach, including acquiring and applying the necessary scientific information and contemporary knowledge, to fulfill its mandate to conserve and protect wild salmon and, where necessary, restore its abundance and the diversity of stocks;

- have ensured that all sectors were co-ordinating their operations and communications in the development and implementation of management plans for the Aboriginal, commercial, and recreational fisheries, using resource conservation objectives to achieve sustainable development;
- have complied with the *Species at Risk Act*, including the preparation of a recovery strategy and action plan for salmon populations listed as endangered, threatened, or extirpated;
- have ensured that its roles and responsibilities in regulating salmon aquaculture in British Columbia and New Brunswick were consistent with its mandate for the conservation and protection of wild salmon and other species as defined in key legislation such as the *Fisheries Act* and the *Oceans Act*; and that where agreements are in place for other agencies to administer provisions of the *Fisheries Act*, accountability requirements for these provisions were clearly articulated;
- have adopted science-based siting criteria and assessed the cumulative environmental effects under the *Canadian Environmental Assessment Act* in its review of salmon aquaculture projects in a timely and efficient manner;
- have ensured that salmon aquaculture facilities comply with the *Navigable Waters Protection Act*;
- have conducted research and acquired scientific information on the impact of salmon aquaculture operations on the conservation and protection of wild salmon stocks and other species and their habitat, and made such information available to decision makers, stakeholders, and the general public; and
- have developed or participated in the development of regulations/standards pertaining to salmon aquaculture, which are consistent with legislation and departmental policies, and ensured that such regulations/standards were enforced directly or monitored regularly through accountability provisions in administration agreements with other agencies.

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Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2004

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2004

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Commissioner of the Environment and Sustainable Development

to the House of Commons

Chapter 6

Environmental Petitions

Office of the Auditor General of Canada

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Office of the Auditor General of Canada

The 2004 Report of the Commissioner of the Environment and Sustainable Development comprises six chapters, and The Commissioner's Perspective—2004. The main table of contents is found at the end of this publication.

This report is available on our Web site at www.oag-bvg.gc.ca.

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Chapter

6

Environmental Petitions

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

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Environmental Petitions

Main Points

6.1 In most cases, departments have responded to complaints raised in petitions about alleged violations of federal environmental laws by promising to launch investigations. However, petitioners are seldom informed of the outcome of these actions and the end result of their petition.

6.2 The audits we conducted of strategic environmental assessment and the management of salmon, which are discussed in chapters 4 and 5 of this report, provided an opportunity to verify departmental claims in selected petition responses. We found that in these cases, some departments portrayed a more positive situation in their petition response than was warranted.

6.3 Our audits of commitments from past petition responses concerning historic military dumpsites off Canada's Atlantic Coast and a pilot project to encourage federal public servants to use urban transit found that progress had been made in translating commitments into concrete action. However, our audit of a commitment stated in a petition response by Fisheries and Oceans Canada revealed that the Department had made limited progress toward developing regulations on genetically engineered fish.

Background and other observations

6.4 This is our annual report to Parliament on the environmental petitions process as required by the *Auditor General Act*. The Commissioner of the Environment and Sustainable Development co-ordinates the petitions process on behalf of the Auditor General.

6.5 Our Office received a total of 40 petitions this year (compared with 38 last year). They came from most parts of the country, with the majority from individuals and local groups and some from national organizations. The petitions covered issues such as trawler dragging on the ocean floor, biotechnology, and pesticide advertising. New issues included the quality of drinking water and other environmental problems on an Aboriginal reserve, environmental fines under the federal tax system, and a hazardous waste incinerator project. The full text of petitions and responses can be found in the petitions catalogue on our Web site (www.oag-bvg.gc.ca/domino/petitions.nsf/english).

The departments have responded. Fisheries and Oceans Canada and Transport Canada have accepted our recommendations. Their responses, which follow the recommendations in the chapter, indicate the actions they intend to take and when these will be completed.

Introduction

Dead trumpeter swan at Judson Lake, B.C.

Source: Kevin Sinclair

6.6 During the past five years, British Columbia resident Kevin Sinclair and his family have witnessed the deaths of over 1,000 migratory trumpeter swans in or near the lake that borders their property. Judson Lake, which straddles the Canada–United States border, has been a popular site for hunters. The petitioner says that the lake is contaminated with lead shot as a result. In an effort to get the lake cleaned up, Kevin Sinclair submitted an environmental petition to our Office (Petition No. 99).

6.7 We forwarded the petition to the Canadian Wildlife Service of Environment Canada. In its response, the Department stated that it was not convinced that Judson Lake is the source of the lead shot that is killing swans found in the area. However, the Department stated that it is working with many partners in Canada and the United States to, among other things, determine the primary source(s) of the problem.

6.8 This is just one example of an environmental petition submitted by a Canadian through the environmental petitions process. Any Canadian resident, whether an individual, an organization, a business, or a municipality, has the right to submit an environmental petition to the Auditor General of Canada. Petitions must address environmental issues involving the federal government. Exhibit 6.1 provides more information on the petitions process and the role of the Commissioner, who oversees the petitions process on behalf of the Auditor General.

6.9 This chapter has the following three parts:

- our annual report to Parliament on new petitions received between July 2003 and June 2004, which also highlights some important issues that arose from petition responses;
- our findings from audits that verified the claims made in two petition responses; and
- our findings from audits of action taken by federal departments to fulfill commitments made in responses to petitions. The petitions concerned military dumpsites off Canada's Atlantic coast (Petition No. 50A), genetically engineered fish (Petition No. 38A), and a pilot project to encourage greater use of urban transit by federal public servants (Petition No. 29).

Exhibit 6.1 **The environmental petitions process and the role of the Commissioner of the Environment and Sustainable Development**

The environmental petitions process was established under the *Auditor General Act* in 1995. It provides a way for Canadians to personally take action on environmental issues that they care about. The federal government is the focus of the petitions process.

The Commissioner of the Environment and Sustainable Development oversees the petitions process on behalf of the Auditor General.

Getting things started	The process is triggered when a resident of Canada submits a petition in writing to the Auditor General of Canada. The process is open to individuals, organizations, municipalities, or corporations.	
Processing a petition	The Commissioner's petitions team reviews incoming petitions to determine if they meet the requirements set out in the *Auditor General Act*. A petition must be submitted by a Canadian resident and deal with an environmental issue that is the responsibility of a federal department or agency subject to the petitions process (see page 7).	
	If the petition is accepted by the Commissioner's staff, they determine which federal departments and agencies are responsible for the issue addressed in the petition and send it to the responsible minister.	If the petition is not accepted, the petitioner will be contacted. If the petition is incomplete or the requests or other information are unclear, the petitioner will be asked to re-submit it.
Responding to a petition	Upon receipt of a petition, a minister is required to do the following: • send out an acknowledgement letter to the petitioner and the Commissioner within 15 days of receipt; and • consider the petition, formulate a substantive reply, and send it to the petitioner and Commissioner within 120 days of receipt.	

Ongoing petitions activities

Monitoring

The Commissioner monitors acknowledgement letters and replies from ministers.

Reporting

Through the petitions chapter, the Commissioner reports to the House of Commons on the number of petitions received, their subject matter, and status.

Highlights of selected petitions and responses are also presented as well as information on departmental compliance with statutory timelines.

Posting on the Web

The Commissioner posts summary information on petitions and publishes petitions and replies on the Web (www.oag-bvg.gc.ca/domino/petitions.nsf/english).

Auditing

Petitions and responses are examined as part of audits conducted on environmental and sustainable development issues.

The Commissioner also conducts selected audits to determine if commitments contained in petition responses are being met by departments and agencies.

Annual report on petitions (19 July 2003 to 30 June 2004)

Use of the petitions process

6.10 We received 40 petitions this year (compared with 38 last year). The petitions came from most parts of the country (Exhibit 6.2), with the exception of the territories. Most continue to come from individual Canadians as well as small local or regional organizations and grass-roots coalitions. Some were submitted by national organizations, such as the Canadian Wildlife Federation. For the first time, we received a petition from a private sector company. The petition (Petition No. 93) concerns a micro-organism, Bacta-Pur®, and the application of New Substances Notification Regulations under the *Canadian Environmental Protection Act, 1999*.

6.11 An overview of petitions activity during our reporting period (19 July 2003 to 30 June 2004) is in the Appendix. It covers new petitions received since July 2003 as well as earlier petitions where a ministerial response was pending.

6.12 Petitions and responses are included in our petitions catalogue on our Web site (*www.oag-bvg.gc.ca/domino/petitions.nsf/english*). Some federal organizations are also posting their responses on their Web sites.

The range of issues is expanding

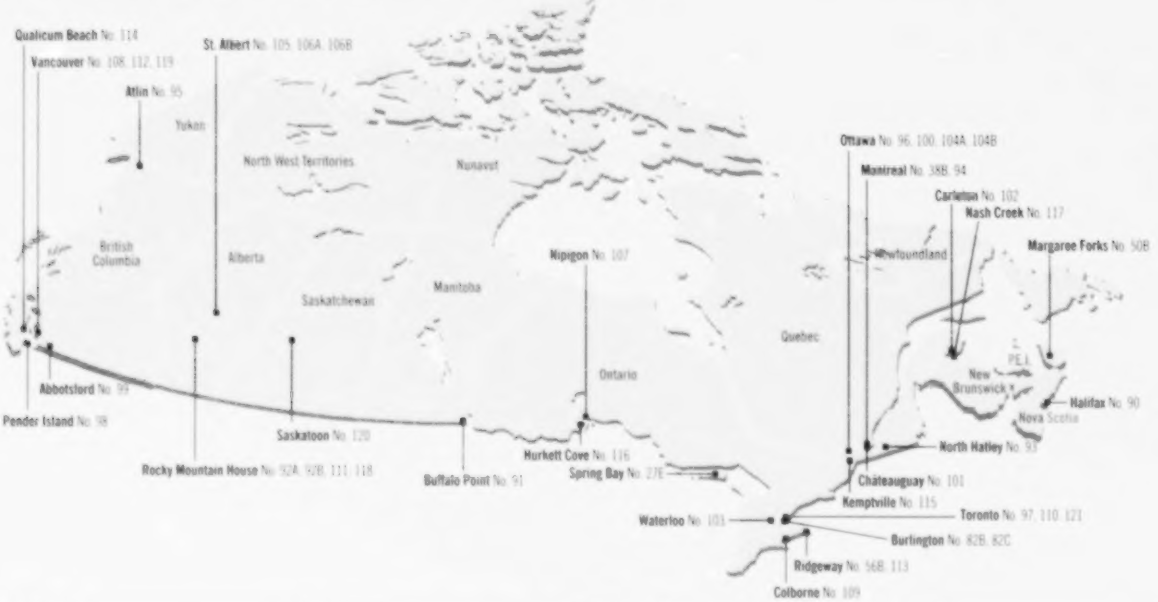
6.13 New types of issues involving the federal government are being raised in petitions. Examples include the following:

- hazardous waste incineration—specifically a project in New Brunswick and possible impacts on the Baie des Chaleurs, Quebec's Gaspé region, and areas south of the Canada–United States border (Petitions No. 102 and 107);
- environmental problems on an Aboriginal reserve located in Manitoba (Petition No. 91); and
- the federal tax system—specifically, the writing off of environmental fines and other penalties as a business expense under the *Income Tax Act* (Petition No. 98).

6.14 Issues concerning the marine environment and marine biodiversity figure more prominently in petitions received during the past year. One example is a petition from the Georgia Strait Alliance and the United Fisherman and Allied Workers Union-Canadian Auto Workers Union. Their petition calls on the federal government to put in place a regulation to prevent municipalities from discharging untreated or partially treated sewage into the ocean (Petition No. 112).

6.15 Over the past year, we have heard from petitioners looking for progress reports, updates, or additional information on issues they covered in their previous petitions. In one case, Algonquin Eco Watch submitted a follow-up petition (Petition No. 27E) when a department failed to provide a report it had promised in response to an earlier petition.

Exhibit 6.2 **Petitions come from many parts of the country (19 July 2003 to 30 June 2004)**


Qualicum Beach No. 114
Vancouver No. 108, 112, 119
Atlin No. 95
St. Albert No. 105, 106A, 106B
Yukon
North West Territories
Nunavut
British Columbia
Alberta
Saskatchewan
Manitoba
Ontario
Quebec
Newfoundland
New Brunswick
P.E.I.
Nova Scotia
Nipigon No. 107
Abbotsford No. 99
Pender Island No. 98
Saskatoon No. 120
Rocky Mountain House No. 92A, 92B, 111, 118
Buffalo Point No. 91
Hurkett Cove No. 116
Spring Bay No. 27E
Ottawa No. 96, 100, 104A, 104B
Montreal No. 38B, 94
Carleton No. 102
Nash Creek No. 117
Margaree Forks No. 50B
Halifax No. 90
North Hatley No. 93
Châteauguay No. 101
Kemptville No. 115
Toronto No. 97, 110, 121
Waterloo No. 103
Burlington No. 82B, 82C
Ridgeway No. 56B, 113
Colborne No. 109

Petition No.	Subject
27E	Follow-up petition concerning the decommissioning of a mainline through Algonquin Park
38B	Follow-up petition on genetically engineered fish
50B	Follow-up petition concerning military dumpsites off the Atlantic coast
56B	Follow-up petition on invasive aquatic species in the Great Lakes
82B	Federal environmental assessment for pipeline relocation for the Red Hill Creek Valley expressway project
82C	Aboriginal burial grounds and the Red Hill Creek Valley expressway project
90	Fishing practices and effects on sensitive fish habitat on the ocean floor
91	Environmental problems at the Buffalo Point Reserve in Manitoba
92A	Follow-up actions arising from the federal environmental assessment of the Oldman River Dam project
92B	Government response to panel recommendations concerning federal environmental assessment and approval of the Oldman River Dam project
93	New Substances Notification Regulations under the *Canadian Environmental Protection Act, 1999*
94	Biotechnology and "Pharming Crops"
95	Acid drainage and re-opening of metal mine in northern British Columbia
96	Environmental and health impacts of game farming in Canada
97	Toxicity of the arsenic-based pesticide Monosodium Methane Arsenate (MSMA)
98	The tax deductibility of environmental fines
99	Dying trumpeter swans in Judson Lake
100	Residential development near the Leitrim wetlands
101	Proposal to build a natural gas generating station at Suroit, Québec
102	Proposed hazardous waste incinerator in Belledune, New Brunswick
103	Development of the coal bed methane industry in Canada

Petition No.	Subject
104A	Proposal to construct a sewage pipeline
104B	Follow-up petition concerning a sewage pipeline in Ottawa, Ontario
105	Federal environmental assessment of a proposed regional road through the Big Lake wetland in St. Albert, Alberta
106A	Proposed regional road in St. Albert, Alberta
106B	Follow-up petition concerning the proposed regional road in St. Albert, Alberta
107	Environmental impact assessment of boat launch project in Hurkett Cove, Ontario
108	Human, social and environmental impacts of genetic engineering
109	Environmental and health impacts of a closed landfill in Cramahe, Ontario
110	The Great Lakes Action Plan
111	Dams on navigable waters in Canada
112	Controlling persistent organic pollutants in municipal wastewater discharges
113	Environmental assessment of the expansion of the Peace Bridge connecting Fort Erie, Ontario and Buffalo, New York
114	Environmental assessment for a proposed road in Qualicum Beach, British Columbia
115	The grey whale, a species at risk
116	Construction of a boat ramp in Hurkett Cove, Ontario
117	Hazardous waste incinerator in Belledune, New Brunswick
118	The environmental impacts of man-made dams
119	Potential adverse impacts of proposed sablefish aquaculture on the wild sablefish stocks and fishery
120	Decommissioning of the Cluff Lake mine in Saskatchewan
121	The *Species at Risk Act*

Departmental responses to petitions

Monitoring of petition responses

6.16 It is the Commissioner's responsibility to monitor petition responses from departments and agencies. To do so, we consider the following questions:

- Are departments responding to petitioners on time?
- Are departments providing a considered response that clearly addresses the questions and other requests made in petitions?

6.17 We are pleased to report that departments are generally meeting the 120-day deadline for responding to petitions. However, there are some exceptions (Exhibit 6.3). Indian and Northern Affairs Canada was late responding to three of four petitions. As of August 2004, two of these were over 180 days late. The Department has informed us that it is taking steps to improve its compliance with the legislated time frame.

6.18 As part of our monitoring of departmental responses to petitions, we review the responses to see if they address the petitioners' concerns and requests in a manner that is clear, comprehensive, and understandable. Most departments met these minimum requirements; however, in a few cases departments' responses did not address petitioners' requests or questions and/or were vague and conveyed little meaningful information.

Departments and agencies subject to the environmental petitions process

Agriculture and Agri-Food Canada
Atlantic Canada Opportunities Agency
Canada Border Services Agency
Canada Revenue Agency
Canada Economic Development Agency for Quebec Regions
Canadian Firearms Centre
Canadian Heritage, Department of
Canadian International Development Agency
Citizenship and Immigration Canada
Environment Canada
Finance Canada, Department of
Fisheries and Oceans Canada
Foreign Affairs Canada
Health Canada
Human Resources and Skills Development Canada
Indian and Northern Affairs Canada
Industry Canada
International Trade Canada
Justice Canada, Department of
National Defence
Natural Resources Canada
Parks Canada Agency
Public Service Human Resources Management Agency of Canada
Public Works and Government Services Canada
Transport Canada
Treasury Board of Canada, Secretariat
Veterans Affairs Canada
Western Economic Diversification Canada

Some petitioners do not know the outcome of their petition

6.19 Some petitioners are continuing to use the petitions process as a way to draw attention to alleged violations of federal environmental laws. These laws involve pesticides, fish habitat, and pollution. In these cases, petitioners asked the responsible departments to investigate their complaints.

6.20 One example is a petition submitted by Earth Action, an organization based in Charlottetown, Prince Edward Island. Earth Action maintained that several companies were contravening advertising rules set out under federal pesticide legislation and asked Health Canada to investigate (Petition No. 87). In its response, the Department announced that its Pest Management Regulatory Agency had initiated investigations of five different companies.

6.21 An official with Health Canada informed Earth Action that the investigations had determined that the federal *Pest Control Products Act* and Regulations had been contravened in all cases. The companies in question were ordered to initiate corrective action, and the Department told the petitioner that it intended to monitor action taken by the companies.

6.22 In this case, Health Canada followed up with Earth Action to let it know that the concerns it had raised in its petition were addressed. However, this is the exception. While departments are continuing to state their intention to investigate the allegations raised in a petition, we noted that some did not provide petitioners with timelines for concluding their investigation; nor did they provide a departmental contact for follow-up. As a result, some petitioners do not know the final actions undertaken by departments on their petition. In such cases where follow-up action has been promised, petitioners sometimes approach our Office or submit a follow-up petition looking for answers. Departments need to do a better job of closing the loop with petitioners.

Exhibit 6.3 **Are departments and agencies meeting their deadlines? (covers responses received 19 July 2003 to 30 June 2004)**

Petition	AAFC	CCRA	CIDA	CH	DFAIT	DND	EC	F&O	Fin	HCan	IC	IT*	INAC	NRCan	Parks	TC	WD
27D								●									
38B					●		●	●		●							
56B							●	●								○	
60B														●			
67			○														
71															●		
72							●									●	
73								●								●	
74					●		●	●								●	
75							○	●							○		
76														●			
77					●												
78						●											
79							●			●							
80						●											
81							●	●								●	
82A								●									
82B							●	●									
82C				●									○				
83							●			●							
84	●						●				○						
85	●		●		●		●			●	●						
86							●								●		
87										●							
88	●				●		●		●	●	●			●	●		●
89							●	●									
90								●									
91							●	●		●			●				
92A								●									
92B	●						●	●		●			○	●		●	
93							●										

Exhibit 6.3 **Are departments and agencies meeting their deadlines? (covers responses received 19 July 2003 to 30 June 2004) (continued)**

Petition	AAFC	CCRA	CIDA	CH	DFAIT	DND	EC	F&O	Fin	HCan	IC	IT*	INAC	NRCan	Parks	TC	WD
94	●	○	○		●		●		●	●	●						
95					○		●	●					○			●	
96	○				●		●			○							
97										●							
98							●		○					●		●	
99							●	●									
100							●	○		○				●		●	
101							●										
102							●					○					
Total Petitions	6	1	3	1	8	2	25	17	3	12	4	1	4	6	4	9	1
Percentage responded on time	83%	0%	33%	100%	88%	100%	96%	94%	67%	83%	75%	0%	25%	100%	75%	89%	100%

● **Responded on time**
○ **Late**

Agriculture and Agri-Food Canada (AAFC), Canada Customs and Revenue Agency (CCRA), Canadian International Development Agency (CIDA), Department of Canadian Heritage (CH), Department of Foreign Affairs and International Trade (DFAIT), National Defence (DND), Environment Canada (EC), Fisheries and Oceans Canada (F&O), Department of Finance Canada (Fin), Health Canada (HCan), Industry Canada (IC), International Trade Canada (IT)*, Indian and Northern Affairs Canada (INAC), Natural Resources Canada (NRCan), Parks Canada Agency (Parks), Transport Canada (TC), Western Economic Diversification Canada (WD)

* Newly created department resulting from the December 2003 reorganization

Highlights of selected petitions and responses

6.23 In this section, we draw attention to some of the petitions and responses we have received during the past year. They highlight issues dealing with biotechnology, the legacy of environmental problems from an abandoned mine, and the transmission of disease from game ranches.

Five petitions focussed on government policy and action on biotechnology

6.24 In 2003–04, Greenpeace submitted five petitions on biotechnology to our Office (Petitions No. 38B, 84, 85, 88, and 94). The petition responses prepared by departments and agencies are substantial documents that reflect the detailed petition questions and requests posed by Greenpeace. We have highlighted selected departments' responses.

6.25 **Information on the economic, financial, and trade impacts of cultivating genetically modified crops is limited.** Greenpeace asked the federal government for information on the impact of what the organization regards as international consumer rejection of products that contain or are made from genetically engineered organisms in Canadian farming and agricultural sectors. In their joint response, federal departments stated that information on this issue is limited and that it is difficult to isolate the possible effects of biotechnology on farm economics and international trade. The departments did state that there were impacts on Canadian canola producers arising from restricted access to certain world markets; however, they also stated that Canadian producers were generally able to offset them by redirecting their shipments to other markets (Petitions No. 85 and 88).

6.26 **Aid to developing countries is not tied to accepting genetically modified products.** Greenpeace received assurance from the Canadian International Development Agency that Canadian food aid (or other humanitarian aid, including medical assistance) is not contingent upon a country's acceptance of genetically engineered commodities. The Agency also stated that it is providing funds for promoting organic and agro-ecological farming practices and for protecting and preserving biodiversity (Petition No. 85).

6.27 **The federal government clarified its labelling requirements for the international trade of genetically engineered agricultural products.** As part of the government's response to Petition No. 85, departments provided a copy of an agreement on genetically engineered organisms, signed by Canada, Mexico, and the United States in October 2003. The agreement applies to all shipments of agricultural products destined for food, feed, or for processing. Under the agreement, exporters are exempt from documentation requirements if an exporter and importer have defined the shipment as not containing genetically engineered organisms. This means that the parties can exempt shipments from these requirements if they contain no more than five percent genetically engineered organisms.

Acid rock drainage continues at the Tulsequah Chief mine in northern British Columbia

6.28 In September 2003, the Society for Atlin's Sustainable Economic Initiatives sent a petition to our Office (Petition No. 95). The petition focussed on toxic runoff from the Tulsequah Chief mine in northwestern British Columbia and the impact on the health of salmon and other aquatic species in waterways around the mine.

In the 2002 Report of the Commissioner of the Environment and Sustainable Development, Chapter 3—Abandoned Mines in the North, we noted that some abandoned mines in the North present a serious threat to human health and the environment and there could be significant environmental damage if nothing is done.

6.29 According to the petitioner, the mine opened in 1951 and closed six years later. The property was later purchased by Redfern Resources Ltd. Redfern wants to re-open the mine; however, the proposal is subject to a federal environmental assessment. Fisheries and Oceans Canada is the lead federal department for this assessment. In its response to the petitioners, the Department indicated that it cannot complete the environmental assessment until Redfern addresses concerns raised by several federal departments and others. Since the petition response, we were informed that the environmental assessment has started again.

6.30 Environment Canada is responsible for the pollution provisions of the *Fisheries Act* and responded to the petitioner's questions about acid rock drainage at the mine site. The Department confirmed that it has issued warning letters and an inspector's direction requiring the company to deal with the problem. An inspection done in October 2003 confirmed that none of the measures taken by the company had significantly reduced the acutely lethal toxicity of the acid rock discharge. The Department stated that it would determine the next steps in accordance with its compliance and enforcement policy for pollution prevention under the *Fisheries Act*.

Acid rock drainage—The result of a reaction of sulphur-containing minerals exposed to air and water, producing toxic run-off that can potentially cause damage to ecosystems downstream. Acid rock drainage is associated mainly with the mining of coal, copper, and other base and precious metals.

Concerns expressed about chronic wasting disease on game farms

6.31 In October 2003, the Canadian Wildlife Federation submitted a petition to our Office (Petition No. 96) about game farming in Canada. One of the petitioner's concerns was about chronic wasting disease on game farms and transmission of this disease to wild populations of deer and other cervids (an animal in the deer family such as deer, elk, moose, and caribou). Chronic wasting disease is a similar disease to bovine spongiform encephalopathy (BSE). According to the petitioner, game farming of elk and deer began in Canada in the mid-1980s and is permitted in all provinces except Newfoundland and Labrador and the territory of Nunavut.

6.32 Our Office forwarded this petition to Agriculture and Agri-Food Canada, Environment Canada, Foreign Affairs and International Trade Canada (now two departments: Foreign Affairs Canada and International Trade Canada) and Health Canada. In its response, Health Canada indicated that it had recently completed two reviews on chronic wasting disease. The first one, published in January 2003, was a compilation of Canadian information on this disease. The second review, published in March 2003, concluded that there is no compelling evidence that this disease can result in human illness. Nevertheless, at the end of its response, Health Canada did note two incidents that suggest that chronic wasting disease has the potential to be a human pathogen.

6.33 Environment Canada has recognized that, although the source of chronic wasting disease is not known, the disease appears to be increasing in prevalence in wild cervids in Western Canada. The Department has been working through a federal/provincial/territorial committee to develop the National Wildlife Disease Strategy, which covers chronic wasting disease and other wildlife diseases. The Department reported that the strategy, which will be implemented across all jurisdictions, will minimize the negative impacts of emerging wildlife diseases on the health of humans, livestock, and wildlife.

Audit of Claims Made in Petition Responses

6.34 For the first time, we verified the claims made in departmental responses to two petitions. This work was done during our audits of strategic environmental assessment by the federal government (see Chapter 4 of this report) and the management of salmon (Chapter 5). The following highlights our audit findings.

6.35 **Deficient petition responses on strategic environmental assessment.** Since 1990, strategic environmental assessment has been in place through a federal Cabinet directive. Under that directive, departments and agencies are required to consider environmental implications and effects when they are developing federal plans, programs, and policies. A doctoral student, Rachel McCormick, petitioned 10 federal departments through our process in 2003 (Petition No. 64). She asked departments to describe how they were integrating strategic environmental assessment into their planning and whether it was making a difference.

6.36 In our audit of strategic environmental assessments, generally we found that information in the petition responses we examined agreed with our related audit evidence. However, information in some responses was at odds with our audit work.

- Fisheries and Oceans Canada stated in its petition response that the Department "determines whether environmental considerations are likely to arise from implementing the proposed policy, plan, or program by conducting a preliminary scan. The scan enables the analyst to identify the potential for direct or indirect outcomes associated with implementing the proposal. If the scan determines that there are no potential outcomes, there is no further analysis required." The Department did not provide evidence that preliminary scans and screening with regard to the Cabinet directive were being done.
- Health Canada indicated that strategic environmental assessment considerations are holistically integrated into its development of new proposals. However, the Department has limited processes in place that can ensure compliance with the directive.
- Finance Canada indicated that it had launched an "enhanced strategic environmental assessment process" in May 2003. Yet, the Department could not show that before then it had any process in place. The

Department stated that two informal strategic environmental assessments were conducted prior to May 2003, but it was unable to provide evidence that these assessments had been undertaken.

6.37 **Despite Fisheries and Oceans Canada's response, questions remain about dramatic decline of wild salmon in the Broughton Archipelago.** A suspected outbreak of sea lice (a marine parasite) in wild pink salmon in the Broughton Archipelago off the British Columbia coast in 2001 prompted the Musgamagw Tsawataineuk Tribal Council to submit a petition to our Office in 2002. The petition suggested that the sea lice came from the numerous salmon farms in the area and questioned how Fisheries and Oceans Canada dealt with the problem in the spring of 2001.

6.38 In its response to the petition, the Department stated that it had assessed the presence of sea lice as part of its annual survey of juvenile salmon. It reported that the salmon sampled were in generally good health, with low levels of infestation by sea lice. Based on that survey, there was no evidence of an epidemic or of a mass mortality of juvenile salmon.

6.39 As part of the Office's follow-up audit on wild salmon (see Chapter 5), we examined the Department's action in the wake of the suspected outbreak of sea lice in the Broughton Archipelago in 2001. We found that it had not done sufficient research to explore the potential impacts of aquaculture and sea lice prior to the alleged outbreak. The Department's report cited in the petition response was based on very limited research and was not peer-reviewed. Beyond the annual survey mentioned earlier, the Department did no further work in 2002 to examine the situation.

6.40 While the number of pink salmon returning to the Broughton Archipelago has fluctuated over the years, there was a dramatic decline in 2002, when an estimated 147,000 returned to the area (compared with 3.6 million in 2000). In 2003, Fisheries and Oceans Canada and the Province of British Columbia responded with action plans, which included monitoring sea lice in the Broughton Archipelago. In May 2004, the Department released results from the 2003 study and specific plans for 2004 that would begin to address the main research gaps identified from the analysis of 2003 data. As we report in Chapter 5, the Department has still not provided clear answers about the potential effect of sea lice on wild salmon stocks and its relation to salmon aquaculture.

Audits of Petition Response Commitments

6.41 In their responses over the years, federal ministers have made commitments to act on the environmental concerns raised by petitioners. To determine whether departments have taken meaningful action, we have audited selected commitments.

6.42 This year we audited commitments in response to three petitions. They were selected on the basis of several criteria. Our audits focussed on the measures taken by departments to carry out commitments made in their petition responses. We expected that each department would have

- clearly identified the commitment and what it means for the department;
- planned its implementation;
- carried out the planned implementation, including communicating any changes as required; and
- determined that it had met the commitment and, where appropriate, evaluated the degree to which it addressed the issue(s) raised in the petition.

For more information, see About the Audit at the end of the chapter.

Military dumpsites off Canada's Atlantic coast

An unwanted legacy

6.43 Over the past century, especially as a result of the two world wars, there have been an estimated 2,800 shipwrecks (some containing munitions) off Canada's Atlantic coast. In addition, at the end of World War II, Canada and other countries disposed of conventional munitions, such as bombs and shells, and chemical/biological warfare agents, such as mustard gas, by dumping them at sea. This was considered an acceptable practice at that time. Ocean disposal of warfare agents and munitions has been prohibited by Canadian law since 1975.

National Defence staff in Cornwall preparing barrels of mustard gas for shipment to Halifax in 1946.
Source: National Archives of Canada

6.44 Unexploded munitions and chemical/biological warfare agents in the marine environment may present a potential risk to human safety and environmental health if disturbed by activities such as dredging, bottom-trawling fishing, shipping, or gas and oil exploration. Conventional munitions have washed ashore on the Atlantic coast. Even if undisturbed, dumped munitions and containers holding chemical warfare agents can be expected to corrode and leak. These sites may pose risks that need to be better understood.

6.45 In 1984, Transport Canada raised the issue of off-shore disposal of mustard gas and unexploded munitions with the Department of National Defence. However, after considering the issue, National Defence did not consider action necessary at that time. It stated, "There is no evidence of a major problem in Canadian waters." The Department recently acknowledged that this issue may have potential human health and environmental concerns due to the increased use of the marine environment.

Petition expressed concern about offshore activities on military dumpsites

On 19 February 1946, a barge containing 10,200 drums of mustard gas was scuttled off Sable Island, Nova Scotia in about 3,000 metres of water.

6.46 In a petition submitted in March 2002, Myles Kehoe posed a number of questions about the presence of chemical warfare agents and munitions in military dumpsites off Canada's east coast (Petition No. 50A). He expressed concerns about the extent to which such sites had been identified and the potential risks assessed, and whether known sites were adequately marked on charts. Among other things, he requested a moratorium on all gas and oil exploration in the near-shore and offshore areas off Canada's Atlantic coast and that all dumpsites be declared exclusion zones for commercial ground fishing.

6.47 The petition was forwarded to six departments:

- National Defence has assumed the role of lead department as these sites tend to be military-oriented.
- Fisheries and Oceans Canada has the mandate to protect fish and the marine environment. Its Canadian Hydrographic Service is responsible for nautical charting.
- Natural Resources Canada has major responsibilities for offshore oil and gas activities. It also provides technical advice, for example, on underwater mapping.
- Environment Canada has technical expertise in identifying and assessing the environmental risks associated with disposal at sea and contaminated sites.
- The Department of Foreign Affairs and International Trade (now two departments: Foreign Affairs Canada and International Trade Canada) is responsible for dealing with the international obligations and activities related to these sites.
- Health Canada has the mandate to protect human health.

Departmental commitments for action

6.48 In its response to Petition No. 50A, National Defence committed to carrying out projects that would continue to identify conventional munitions and begin to identify military dumpsites. It also committed to assessing the risk to human health and the environment and to setting priorities for subsequent cleanup or other appropriate action. Natural Resources Canada and Environment Canada committed to providing technical and scientific expertise to the project. Fisheries and Oceans Canada, through the Canadian Hydrographic Service, committed to charting military dumpsites, based on information provided to it by National Defence.

Focus of the audit

6.49 We concentrated on the actions of National Defence, Fisheries and Oceans Canada, Natural Resources Canada, and Environment Canada. We excluded Health Canada and the Department of Foreign Affairs and International Trade as they had less involvement in implementing these commitments.

6.50 The objective of the audit was to assess the extent to which these four departments implemented certain commitments made in their responses to Petition No. 50A. Overall, their commitments fell into the following categories:

- identifying and assessing the risks of underwater military dumpsites containing chemical/biological warfare agents and conventional munitions;
- communicating known information about sites and risks to relevant stakeholders; and
- preparing a contingency plan in the event of an ecological disaster.

Observations

Departments are identifying and assessing risks

6.51 National Defence has initiated two major projects that are intended to fulfill its commitments to identify sites and assess their risks. These are:

- the Warfare Agent Disposal project, which deals with marine and land-based sites that contain chemical and biological agents, including mustard gas; and
- the Underwater Unexploded Ordnance (UXO) project, which deals with underwater sites that contain conventional munitions, including mines and shells.

Exhibit 6.4 provides a timeline of activities related to historic underwater military dumpsites.

The Warfare Agent Disposal Working Group

This Working Group was established in 2002 to provide guidance to the Warfare Agent Disposal project. It is composed of scientific, policy, and technical experts. Aside from National Defence, it includes representatives from Foreign Affairs Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, and Natural Resources Canada. It is also a forum for sharing information among departments.

6.52 The Warfare Agent Disposal project is scheduled for completion in 2008. The main focus of the Warfare Agent Disposal project is to identify marine and land-based sites containing chemical and biological warfare agents and to assess their risks. The project includes a review of scientific literature and historical research to locate possible sites.

6.53 Work on the project began early in 2002. A formal review of scientific literature and the development of risk assessment models began in 2004. It is too early to predict whether the project will be completed by 2008 as scheduled.

6.54 About $14.4 million has been committed for this project. This amount does not cover any site cleanup or remediation that may be required. National Defence has indicated that it will seek funding if these sites require further action. Departmental officials have indicated that the potential cost of deep ocean surveys (over 1,000 metres) may be over $1 million per site.

An unexploded ordnance off Canada's East coast.
Source: National Defence

6.55 High-risk sites requiring surveys are currently being identified as part of the project. To date, two underwater sites that may contain warfare agents have been found. The first is south of Sable Island, and the second is south of the Grand Banks. Five land-based sites that possibly contain warfare agents have also been identified.

6.56 The Underwater Unexploded Ordnance project is scheduled for completion in 2006. The Underwater Unexploded Ordnance project was

Exhibit 6.4 Timeline of activities related to underwater military dumpsites

1900 to 1945	Many shipwrecks occur during this period. Military action during the First and Second World Wars results in the sinking of many vessels off Canada's east coast.
1946	A barge containing about 10,200 drums of mustard gas is scuttled off Canada's east coast.
1972	The London Dumping Convention is signed; it bans disposal of chemical and biological weapons at sea. Many countries sign the Biological and Toxin Weapons Convention in Geneva and commit to continuing negotiations on a treaty to ban chemical weapons.
1975	Canada ratifies the London Convention.
1984	Correspondence is sent between the deputy ministers of Transport Canada and National Defence regarding the presence of chemical warfare agents off Canada's east coast.
1995	A final report is presented to the Helsinki Commission (the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area) on the risks of dumped chemical munitions on the marine environment.
2000	Canada ratifies the 1996 Protocol to the 1972 London Convention.
2001	• An initial report on underwater sites containing unexploded ordnance is prepared for National Defence, identifying the top 50 sites for investigation. • The Underwater Unexploded Ordnance (UXO) working group is formed.
2002	• The Warfare Agents Disposal (WAD) project is started. • National Defence launches the Unexploded Ordnance project with support from the UXO Working Group. • Petition No. 50A is received. • The WAD Working Group is formed.
2003	UXO site surveys commence and an updated UXO report is received by National Defence. An historical review to identify possible warfare agent sites begins (part of WAD project).
2004	A formal scientific literature review and work on risk assessment models begin for the WAD project.
2006	Identification and assessment of the risks of underwater unexploded ordnance sites are expected to be completed by 2006.
2008	Identification and assessment of risks of chemical/biological warfare agent sites are expected to be completed by 2008.

have been found. The first is south of Sable Island, and the second is south of the Grand Banks. Five land-based sites that possibly contain warfare agents have also been identified.

6.56 **The Underwater Unexploded Ordnance project is scheduled for completion in 2006.** The Underwater Unexploded Ordnance project was

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Exhibit 6.4 **Timeline of activities related to underwater military dumpsites**

1900 to 1945 Many shipwrecks occur during this period. Military action during the First and Second World Wars results in the sinking of many vessels off Canada's east coast.

1946 A barge containing about [illegible] of mustard gas is scuttled off Canada's east coast.

1972 The London Dumping Convention is signed. It bans disposal of chemical and biological weapons at sea.

Many countries sign the Biological and Toxin Weapons Convention in Geneva and commit to continuing negotiations on a treaty to ban chemical weapons.

1975 Canada ratifies the London Convention.

1984 Correspondence is sent between the deputy ministers of Transport Canada and National Defence regarding the presence of chemical warfare agents off Canada's east coast.

1995 A final report is presented to the Helsinki Commission (the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area) on the effect of dumped chemical munitions on the marine environment.

2000 Canada ratifies the 1996 Protocol to the 1972 London Convention.

2001
- An initial report on underwater sites containing unexploded ordnance is prepared for National Defence, identifying the high risk sites for investigation.
- The Underwater Unexploded Ordnance (UXO) working group is formed.

2002
- The Warfare Agents Disposal (WAD) project is started.
- National Defence launches the Unexploded Ordnance project with support from the UXO Working Group.
- Petition No. 59A is received.
- The WAD Working Group is formed.

2003 UXO site surveys commence and an updated UXO report is received by National Defence. An historical review to identify possible chemical agent sites begins (part of WAD project).

2004 A formal scientific literature review and work on the assessment models begin for the WAD project.

2006 Identification and assessment of the risks of underwater unexploded ordnance sites are expected to be completed by 2006.

2008 Identification and assessment of risks of chemical warfare agent sites are expected to be completed by 2008.

initiated in mid-2002 to investigate marine sites that may contain conventional munitions and to set priorities for work on them. Prior to the launch of this project, National Defence had already started to identify underwater unexploded ordnance wrecks and sites.

6.57 The Department compiled a list of 509 suspected and known underwater sites. Of these, 48 were considered high-priority, while the remaining 461 were considered to be of relatively little risk. The Department assessed the risk of these sites based on proximity and accessibility to the public, the type and quantity of the munitions they contain, and the risk to the environment. No further investigation or cleanup is planned for these 461 low-risk sites at this time, but the Department stated that this may change if new information arises.

6.58 By 31 March 2004, the Department had done an initial survey of 25 of the 48 high-risk sites. Departmental officials indicated that their goal is to assess about 10 sites a year, depending on the availability of equipment and on weather conditions.

6.59 The total funding for the Underwater Unexploded Ordnance project is about $1.1 million. As with the Warfare Agent Disposal project, the budget does not include funds for cleanup or other remediation.

Fisheries and Oceans Canada informed us that based on its review of international research, the risk of mustard gas to fisheries resources in deep cold water is low, and therefore no further science activity on its part is necessary at this time. The Department has committed to continuing to assess the need for further activity through its support of the Warfare Agent Disposal project.

Departments are communicating and sharing information

6.60 The departments have committed to communicating and sharing information about underwater military dumpsites to stakeholders, including the public, media, fishers, and petroleum industry workers. Providing information on underwater military dumpsites is an ongoing activity.

6.61 National Defence has developed communication plans for both projects. It has also published a pamphlet entitled *Dealing with the Legacy of Warfare Agent Disposal* and has posted project information on the Internet at www.wadproject.forces.gc.ca. A pamphlet entitled *Understanding the Underwater UXO Survey Project* has also been published. In addition, National Defence provided information to the Canada–Nova Scotia Offshore Petroleum Board for offshore oil and gas exploration projects. It issued public notices on the cleanup of particular sites, such as the HMS *Raleigh*, a British cruiser sunk in 1922 off the coast of Labrador.

In our April 2003 Report, Chapter 7—Environmental Stewardship of Military Training and Test Areas, we noted that contamination related to land-based munitions had become an increasingly prominent issue. We recommended that National Defence identify land sites potentially contaminated by energetic materials (including unexploded ordnance) and develop an action plan for mitigation that includes priorities, timetables, and budgets. The Department stated that more work must be done to understand the nature and composition of this potential contaminant.

6.62 The Canadian Hydrographic Service (CHS) of Fisheries and Oceans Canada committed to marking dumpsites on navigation charts. It has already charted about 20 sites containing conventional munitions. National Defence provided information to the CHS on the two underwater military dumpsites containing warfare agents. The Canadian Coast Guard issued a Notice to Shipping about these two sites in February 2004.

Contingency plan—departments are taking steps to meet their commitments

6.63 There are a number of unknowns regarding the hazards that these underwater sites may pose. Departments recognized the need for a plan to deal with potential incidents and committed to doing so in their responses to Petition No. 50A.

6.64 National Defence has documented procedures to deal with the discovery of munitions. Other federal departments have emergency preparedness programs in place to address, for instance, oil spills and gas emergencies. However, none specifically addresses chemical and biological warfare agents.

6.65 In April 2004, members of the Warfare Agent Disposal Working Group began to discuss the need for an overall government-wide contingency plan. The group indicated that such a plan would identify critical components to consider, including hazards of munitions and warfare agents, marine incidents and spills, public safety responses, and likely exposure scenarios. The plan would also identify the key organizations and their roles.

Genetically engineered fish

Introduction

Genetically engineered organism—An organism whose genes have been altered in a way that does not happen in nature

Source: Fisheries and Oceans Canada

6.66 Research on genetically engineered (GE) aquatic organisms, such as GE fish, started in the early 1980s and has increased rapidly around the world in the past few years. GE fish are being developed with biotechnology to use in medical applications, to detect pollution, and as aquarium pets. They are also being developed for the aquaculture industry—for example, to grow faster and tolerate cold temperatures.

6.67 At present, no GE fish are being farmed commercially in Canada but research is being done toward that end. For example, in Prince Edward Island, a U.S-based company is conducting research on GE salmon. That company has submitted an application to U.S. regulators for commercialization of faster-growing salmon, and Canadian regulators believe that a similar application could be made in Canada.

6.68 Scientists, regulators, and the public are concerned about the potential ecological impacts if GE fish accidentally escape into natural ecosystems. For example, faster growing GE fish could out-compete wild fish for food and territory. Scientists are just beginning to understand the effects of GE fish on the natural environment.

Fisheries and Oceans Canada made a commitment to act

6.69 Greenpeace Canada submitted a petition on GE fish in November 2001 (Petition No. 38A). The organization was seeking information on the regulation of GE fish and a confirmation of the federal government's policy on the rearing of them in Canada.

Transgenic organism—a type of genetically engineered organism that has had genes from the same or another organism added to it. For example, genes from a cold-tolerant fish can be put into Atlantic salmon so the salmon are able endure cold temperatures.

6.70 Fisheries and Oceans Canada and several other federal departments provided a joint response to this petition in April 2002. Fisheries and Oceans Canada was asked to respond because the Department's mandate is to manage and protect fish and fish habitat. We selected three commitments in the Department's petition response to audit:

- Fisheries and Oceans Canada is developing regulations under the *Fisheries Act* for aquatic organisms with novel traits, including genetically engineered fish.
- Fisheries and Oceans Canada will continue to conduct research studies to strengthen risk assessment protocols in support of regulatory requirements and enhance understanding of the potential impacts of aquatic organisms with novel traits.
- Fisheries and Oceans Canada supports the North Atlantic Salmon Conservation Organization (NASCO) in its efforts to ensure that aquatic organisms with novel traits, in this case salmon, cannot have an impact on wild fish stocks by, among other actions, ensuring that the use of transgenic salmon is confined to secure, self-contained, land-based facilities.

The North Atlantic Salmon Conservation Organization (NASCO) was established in 1983 under the Convention for the Conservation of Salmon in the North Atlantic Ocean, with a mandate to promote the conservation, restoration, enhancement, and rational management of salmon stocks in the North Atlantic Ocean through international co-operation. Canada is a party to the Convention, with Fisheries and Oceans Canada as the lead federal department.

Focus of the audit

6.71 Based on the commitments above, we set out to verify whether Fisheries and Oceans Canada was making progress in developing the regulations and conducting research to strengthen risk assessment in support of the regulations. We also looked at whether the Department was ensuring adherence to the NASCO guidelines on the rearing of GE salmon.

Observations and Recommendations

Fisheries and Oceans Canada has committed to developing regulations on GE fish

6.72 **GE fish are currently regulated under the *Canadian Environmental Protection Act, 1999* (CEPA, 1999).** Environment Canada administers CEPA, 1999 and its associated regulations. These, along with the acts and regulations listed in CEPA schedules, cover all new substances intended for sale, manufacture, or import in Canada. New substances include everything from new commercial chemicals to living organisms that are products of biotechnology, such as GE plants, micro-organisms, animals, and fish (see CEPA, 1999, this page).

In the U.S., a genetically engineered fish that glows in the dark (GloFish™) is being sold as an aquarium pet. In January 2004, GloFish™ were imported into Canada in violation of federal regulations. Environment Canada took enforcement action and some of these fish were seized and destroyed. The company that developed GloFish™ in the U.S. is now in the process of legally notifying Canadian regulators of its intention to sell GloFish™ in Canada.

6.73 While CEPA, 1999 and its associated regulations address the basic need for regulating all new substances, the federal government has recognized that it needs a specific regulation for GE fish and other novel aquatic organisms. Two of the core principles underlying Canada's approach to the regulation of the products of biotechnology are the following:

- Departments are responsible for regulating biotechnology products that fall within their area of expertise.
- The regulatory system is to build on existing legislation and institutions.

6.74 Fisheries and Oceans Canada's commitment to develop regulations on GE fish and other aquatic organisms with novel traits is in line with these principles. The Department has the expertise to deal with fish and other aquatic organisms and is therefore seen by the government as best placed to manage a regulatory system geared specifically to meeting the complex challenges associated with GE fish.

Canadian Environmental Protection Act, 1999 (CEPA, 1999)

New substances, including animate products of biotechnology, are regulated under CEPA, 1999. No person may manufacture or import a new substance unless they provide the Minister of the Environment with information enabling the Minister to evaluate the potential effects of the substance on human health and the environment.

CEPA, 1999 recognizes that other federal acts and regulations can require a similar notification and assessment. The Governor in Council has exclusive authority to determine whether other acts and regulations meet the CEPA, 1999 criteria. If so, the new substances regulated under those Acts and regulations are exempt from CEPA, 1999.

Aquatic organisms with novel traits such as GE fish are considered animate products of biotechnology and are regulated under CEPA, 1999. When regulations pursuant to the *Fisheries Act* have been determined by the Governor in Council to meet the CEPA, 1999 criteria, Fisheries and Oceans will then have the responsibility for regulating and assessing these new organisms.

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6.75 **All timelines for completing the regulations were missed.** Fisheries and Oceans Canada first signalled its intention to develop regulations on GE fish in 1992. Since then, the Department has stated repeatedly that it is in the process of developing the regulations (see Timelines set by Fisheries and Oceans Canada for completing regulations on GE fish, this page). Completion dates for the regulations have been set several times but not met. For example, a parliamentary committee reported in 1996 that the regulations were being drafted. Completion dates of 1998–99, 2001, and 2002 have also not been met.

6.76 The Department developed a first draft of the regulations in 1997, but it was never finalized. Another version was developed in 2001 with the intention of listing it in CEPA, 1999. However, the regulations did not meet the listing criteria and were not finished.

6.77 **Fisheries and Oceans Canada has yet to determine when the regulations will be completed.** The Department has not revised the draft regulations since 2001. While research is being conducted to solidify the science base required for the regulations, the Department is only now laying the groundwork for other action needed to develop the regulations. This includes defining a clear vision of what the Department wants the regulations

Timelines set by Fisheries and Oceans Canada for completing regulations on GE fish

November 1996—The House of Commons Standing Committee on the Environment and Sustainable Development Report on Biotechnology states that Fisheries and Oceans Canada's regulations are being drafted.

April 1997—An internal Fisheries and Oceans Canada memo states that the Department is committed to having the regulations in place that year.

1998-1999—Industry Canada's BRAVO Web site (as of 17 May 2004) states that GE fish regulations are expected to come into effect during 1998–99.

May 2000—In its response to Petition No. 23, Fisheries and Oceans Canada states that it is developing regulations.

Late 2000/early 2001—Senior management at Fisheries and Oceans Canada commits to Environment Canada that the regulations will be in force in the fall of 2002.

November 2001—A senior management briefing note states that the Minister of Fisheries and Oceans committed to developing the regulations by the fall of 2002.

April 2002—In its response to Petition No. 38A, Fisheries and Oceans Canada states that it is developing regulations.

August 2002—The Canadian Biotechnology Advisory Committee, set up to provide expert advice to the federal government on biotechnology matters, reports that Fisheries and Oceans Canada is currently developing regulations.

April 2003—In an internal audit document, Fisheries and Oceans states that the target date for the regulations is 2005.

January 2004—In its response to Petition No. 38B, Fisheries and Oceans Canada states that it is developing the regulations.

June 2004—Fisheries and Oceans Canada states that it cannot give a timeline for completing the regulations.

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to achieve. Others measures the Department needs to complete are the following:

- Establish a sound policy base for the regulations.
- Determine if any changes to the *Fisheries Act* are required.
- Develop an implementation plan that includes a cost estimate and a clear definition of roles and responsibilities.
- Determine the full scope and components of the regulations, including the extent to which they will regulate research.
- Consult with the provinces and other stakeholders.
- Allocate a departmental budget for operational needs.

6.78 In 1992, Fisheries and Oceans Canada began to develop a policy on the research and rearing of GE fish. While it has never been finalized, the Department stated that portions of the policy will form the basis for some aspects of the regulations, particularly risk assessment.

6.79 Until the regulations are completed and listed under CEPA, 1999, Environment Canada retains overall responsibility for GE fish and other aquatic organisms with novel traits. In the interim, Environment Canada, Health Canada, and Fisheries and Oceans Canada signed an agreement in May 2004. Under this agreement, Fisheries and Oceans Canada will provide advice and conduct risk assessments on behalf of Environment Canada. Fisheries and Oceans Canada also committed to developing a work plan and completing the regulations expeditiously.

6.80 **Recommendation.** Fisheries and Oceans Canada should determine whether or not it will develop regulations on genetically engineered (GE) fish. If it decides to proceed with regulations, it should identify a clear timeline for completing the regulations, establish a work plan, and report publicly on its progress.

Fisheries and Oceans Canada's response. The Department accepts the recommendation. Fisheries and Oceans Canada continues to respond to developments emerging in the field of GE fish. The *Canadian Environmental Protection Act, 1999* (CEPA) currently regulates the import or manufacture of these species. Under a Memorandum of Understanding signed between Environment Canada, Health Canada, and Fisheries and Oceans Canada in May 2004, Fisheries and Oceans Canada has committed to administering the *New Substances Notification Regulations* under CEPA for aquatic organisms with novel traits. Along with our continued efforts to develop the scientific and risk assessment knowledge base for GE fish, the Department will regulate aquatic organisms with novel traits using existing CEPA authorities.

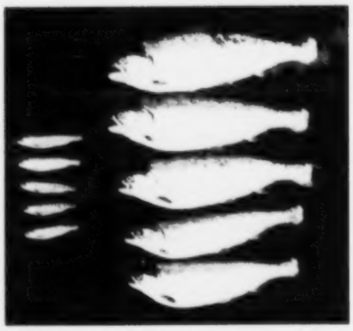
The Department has begun the development of internal processes for notification and risk assessment and will publish these processes on its Web site by the end of 2005.

The Department will review regulatory options, decide on a regulatory strategy, and develop appropriate timelines for regulatory action—by the end of 2005.

The Department will revise and finalize its policy on transgenic aquatic organisms by the end of 2005, incorporating regulatory requirements and current scientific assessment frameworks.

Research to support the regulations is underway

6.81 Fisheries and Oceans Canada is meeting its commitment to conduct research. The Department has a research laboratory in Vancouver where scientists have been producing faster-growing GE fish since the early 1990s to understand some of the environmental and indirect human health risks associated with them. Research at the laboratory has continued unabated over the last decade in order to determine the risks of GE fish and conduct risk assessments. Scientists say that funding for staff positions, which had been uneven over the years, is now fairly stable.



Transgenic (right) and non-transgenic (left) coho salmon at one year of age.

Source: Fisheries and Oceans Canada

6.82 Fisheries and Oceans Canada has assessed its research needs and determined that it has limited knowledge of how a GE aquatic organism would interact in the natural environment. To date, research has been limited to the laboratory. Among other activities, scientists have identified the need to construct a contained artificial stream to study the way GE fish and wild fish interact in a more natural setting. The Department has stated that the kind of research needed to study the impact of GE fish on the natural environment would take more resources than presently allocated. The Department is working with Environment Canada and other federal departments to launch a research network to study the effects of novel organisms on the environment. Senior management at Fisheries and Oceans Canada has identified this research network as a priority.

6.83 The Department has also been working with other researchers in Canada and abroad. In March 2004, it held a meeting of scientific experts from several countries to discuss information gaps and areas of uncertainty related to GE fish. The Department informed us that this meeting helped to establish the state of science on examining the risks of GE fish, including the need for containment.

Ensuring secure, land-based containment of genetically engineered salmon

6.84 Given scientific uncertainty about the risks of GE salmon, Canada and other parties to the North Atlantic Salmon Conservation Organization (NASCO) agreed to guidelines on Transgenic Salmon in 1997. These guidelines direct member parties to take all possible action to contain transgenic salmon in secure, land-based facilities.

6.85 There are currently no GE fish being farmed commercially in Canada. However, in addition to Fisheries and Oceans Canada researchers, scientists with private companies, medical institutions, and universities are conducting research on GE fish or other aquatic organisms in Canada. At the time of our audit, eight facilities were involved in this kind of research. Three of them, aside from Fisheries and Oceans Canada's laboratory, are working with GE salmon. As a result, our audit examined the Department's action to ensure that these facilities are rearing GE salmon in secure, land-based facilities in keeping with the NASCO guidelines.

6.86 Fisheries and Oceans Canada has inspected the three GE salmon research facilities that it is aware of and is satisfied that the salmon are adequately contained. Existing regulations under the *Fisheries Act* require researchers to obtain a permit to transfer fish into their laboratories. Quarantine measures are required and the Department has stated that these satisfy the containment requirements under NASCO. Environment Canada has also inspected these research facilities, including Fisheries and Ocean Canada's research facility in Vancouver.

6.87 **Fisheries and Oceans Canada needs to be aware of GE fish research being undertaken here**. The Department has stated that it does not systematically monitor GE fish research in Canada. Nevertheless, it claims that it is aware of all research on GE fish being conducted in Canada.

6.88 Fisheries and Oceans Canada says that it depends on informal contacts within the research community to keep abreast of research developments for GE fish. The Department states that it keeps track of GE fish research activity because of requirements under its regulations that researchers obtain permits from the Department prior to all transfer or release of fish. However it says that it relies on researchers to be aware of regulatory requirements to obtain a permit for the transfer or release of fish. We noted that information about the Department's permit requirements is not posted on its Web site or otherwise systematically communicated to the public.

6.89 There are no specific provisions under Fisheries and Oceans Canada's regulations that require researchers to inform the Department that they are working with GE fish in their laboratory. In addition, research and development on GE fish and other aquatic organisms with novel traits is exempt from notification requirements under CEPA, 1999 and its associated regulations as long as there is no release of the organisms into the environment. Environment Canada has recognized that amendments may be needed to CEPA to include notification on research and development of genetically engineered organisms in order to be able to monitor research activities.

6.90 **Fisheries and Oceans Canada is not effectively communicating the need for containment.** The Department informed us that it communicated the need for containment to the research community during a series of consultations on its draft policy during the 1990s. We noted that it has not conducted any recent consultations.

6.91 The Department stated that it uses the draft policy on research and rearing of GE fish to inform the research community about the need for containment. However, none of this information is available on Fisheries and Oceans Canada's Web site. In addition, the policy sends mixed messages to researchers. For example, it contains references to situations where the rearing of GE fish in open net pens might be allowed and does not clearly state that all GE fish must be contained in secure, land-based facilities.

6.92 **Recommendation.** To minimize the risk of GE fish being released into the environment, Fisheries and Oceans Canada, in consultation with Environment Canada, should ensure that requirements for containment of GE fish are clearly communicated to researchers. It should also address the gaps in notification of research activity involving GE fish and other aquatic organisms in Canada.

Fisheries and Oceans Canada's response. The Department accepts the recommendation. Fisheries and Oceans Canada, in consultation with Environment Canada, will develop a comprehensive list of facilities undertaking research with GE fish by the end of 2004. This list will be used to update researchers on regulatory requirements and for consultations as we develop our policy on transgenic aquatic organisms.

The Department will update its Web site by the end of 2005 to ensure that access to relevant information for researchers involved with transgenic aquatic organisms is more user-friendly.

The exemption for notification of research activities involving transgenic organisms will be addressed as part of the upcoming review of the *Canadian Environmental Protection Act 1999*, being led by Environment Canada with Fisheries and Oceans Canada's involvement. In addition, the Department will include consideration of notification issues in the development of policy and regulatory options for transgenic aquatic organisms.

The Department is appraised of issues related to notification of research and will continue to include these issues for consideration while developing policy and regulatory tools on an ongoing basis.

The Transit Pass Pilot Project

Getting on board with local initiatives

Increased use of urban transit can lower road congestion and levels of greenhouse gas emissions.

6.93 Payroll deduction transit pass programs are available in some urban centres across Canada. In return for a commitment to purchase a transit pass for a minimum length of time, customers receive a discount as well as a convenient means to pay for the pass. This type of transit pass program was launched in 2000 in the National Capital Region (NCR) by OC Transpo and the Société de Transport de l'Outaouais (STO). In January 2004, local transit authorities reported to us that over 65 companies and 6,800 people were participating in payroll deduction transit pass programs in the NCR.

6.94 The Treasury Board Secretariat was first approached by OC Transpo in 1999 to see if the federal government would participate in a payroll deduction transit pass program for federal employees (the ECOPASS Program). The government refused because it did not want to grant access to its payroll system for items other than work-related benefits or the government's United Way charity campaign.

6.95 The Government of Canada is one of the country's largest employers, with over 360,000 employees. Transport Canada recognizes that travel choices made by its employees can have an impact on climate change and greenhouse gas emissions. In leading by example, the government can also have an impact on public awareness about reducing greenhouse gas emissions.

6.96 After the government's refusal to sign on to a payroll deduction program, Arun Thangaraj joined with 75 other Canadians and sent a petition to our Office in June 2001. The petition asked the government to reconsider its decision. According to the petitioners, this kind of program would provide substantial savings for riders, increase the use of urban transit, and generate significant benefits such as reduced traffic congestion and lower levels of greenhouse gas emissions.

6.97 Our Office forwarded the petition to Environment Canada, Transport Canada, and the Treasury Board Secretariat, which have specific responsibilities related to this matter, as follows:

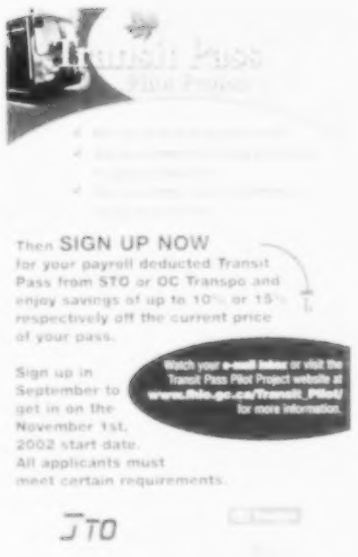
- Environment Canada is responsible for preserving and enhancing the quality of the natural environment, including air, and shares the lead responsibility for climate change with Natural Resources Canada.
- Transport Canada works to ensure safe, efficient, and environmentally friendly transportation.
- The Treasury Board Secretariat manages the government's financial, personnel, and administrative responsibilities.

6.98 In their October 2001 responses to the petition, the three departments committed to a pilot project to assess the effectiveness of a payroll deduction program to increase the number of federal employees using urban transit. The government saw this project as a way to address greenhouse gas and other air emissions that are a result of government business and employee commuting.

Focus of the audit

6.99 We set out to determine whether Environment Canada, Transport Canada, and the Treasury Board Secretariat had fulfilled their commitment to implement the pilot project and assess its effectiveness in increasing the number of federal employees using urban transit.

A trial project


Transit Pass
Pilot Project

Then **SIGN UP NOW** for your payroll deducted Transit Pass from STO or OC Transpo and enjoy savings of up to 10% or 15% respectively off the current price of your pass.

Sign up in September to get in on the November 1st, 2002 start date. All applicants must meet certain requirements.

Watch your **e-mail inbox** or visit the Transit Pass Pilot Project website at **www.fhio.gc.ca/Transit_Pilot/** for more information.

Poster promoting the Transit Pass Pilot Project

Source: Transport Canada

6.100 The government met its commitment to develop a pilot project. In June 2002, it announced a year-long Transit Pass Pilot Project starting in November 2002. Under the project, federal employees in the National Capital Region who work for Environment Canada, Natural Resources Canada, Transport Canada, and the Treasury Board Secretariat could purchase an annual transit pass at a reduced rate through monthly payroll deductions.

6.101 The main objective of the pilot project was to increase the number of public servants using urban transit. Other objectives were to

- demonstrate the Government of Canada's leadership on climate change through concrete visible action;
- reduce greenhouse gas and other air emissions; and
- increase awareness about climate change and air issues among employees in the four participating federal departments.

Initiatives to change people's transportation behaviour

Initiatives that focus on changing people's transportation behaviour, in conjunction with technological solutions, are an integral part of the federal government's strategy to reduce greenhouse gas emissions and achieve sustainable transportation. Such initiatives involve building demand for sustainable transportation choices, making sustainable forms of transportation more attractive to Canadians, and reducing the adverse impacts of vehicle use (see the Commissioner's 2003 Report, Chapter 2, Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases).

Transport Canada has developed a Commuter Options Guide that lists a number of initiatives that employers can take to encourage increased transit use by employees. One of these involves having employers inform transit planners where their employees live and work so that transit authorities can decide how to make best use of their vehicles. Another involves providing subsidies for employees' transit fares.

In a bid to increase ridership, the City of Winnipeg's transit authority sells passes to employers at a 10 percent rebate. Most companies then sell the passes to their employees at a 30 percent discount. Sales of monthly passes and total transit usage have reportedly increased as a result of this initiative.

The Belgian federal government embarked on an aggressive plan to reduce traffic gridlock by offering free rail transit to civil servants and state employees to their workplace, beginning 1 March 2004. Subject to certain conditions, this plan will be extended to private sector employees, beginning 1 January 2005.

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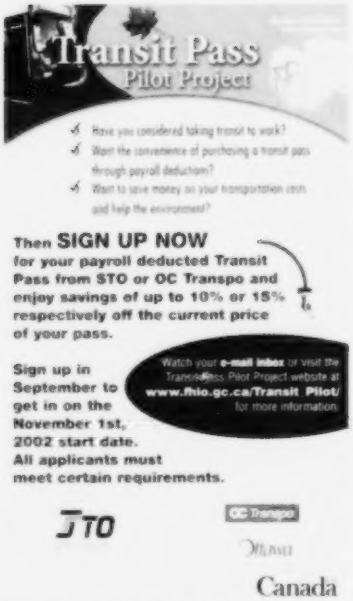

Transit Pass

Pilot Project

- ✓ Have you considered taking transit to work?
- ✓ Want the convenience of purchasing a transit pass through payroll deduction?
- ✓ Want to save money on your transportation costs and help the environment?

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- increase awareness about climate change and air issues among employees in the four participating federal departments.

Initiatives to change people's transportation behaviour

Initiatives that focus on changing people's transportation behaviour, in conjunction with technological solutions, are an integral part of the federal government's strategy to reduce greenhouse gas emissions and achieve sustainable transportation. Such initiatives involve building demand for sustainable transportation choices, making sustainable forms of transportation more attractive to Canadians, and reducing the adverse impacts of vehicle use (see the Commissioner's 2003 Report, Chapter 2, Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases).

Transport Canada has developed a Commuter Options Guide that lists a number of initiatives that employers can take to encourage increased transit use by employees. One of these involves having employers inform transit planners where their employees live and work so that transit authorities can decide how to make best use of their vehicles. Another involves providing subsidies for employees' transit fares.

In a bid to increase ridership, the City of Winnipeg's transit authority sells passes to employers at a 10 percent rebate. Most companies then sell the passes to their employees at a 30 percent discount. Sales of monthly passes and total transit usage have reportedly increased as a result of this initiative.

The Belgian federal government embarked on an aggressive plan to reduce traffic gridlock by offering free rail transit to civil servants and state employees to their workplace, beginning 1 March 2004. Subject to certain conditions, this plan will be extended to private sector employees, beginning 1 January 2005.

Promoting sustainable choices and green commuting is consistent with the 2004 sustainable development strategies of nine federal departments.

The Federal House in Order initiative

The Federal House in Order initiative is the Government of Canada's plan for reducing greenhouse gas emissions within its own operations. The Transit Pass Pilot Project is part of this initiative.

6.102 The pilot project was organized and managed by a working group of staff from the four departments and Public Works and Government Services Canada (PWGSC). The four departments signed separate service agreements with the local transit authorities. Prior to launching the project, the PWGSC payroll system had to be modified. Departments actively communicated with eligible employees, and the working group took steps to monitor employee uptake.

Important steps taken to measure results

6.103 Two surveys were taken to provide the federal government with information on whether the objectives were met and whether the program should be extended. According to departmental officials, about 8,800 people were eligible to participate in the project. Transit authorities indicated that about 880 or 10 percent of all eligible employees could be expected to sign on to the project. A total of 915 employees chose to participate; 54 of them were new users of urban transit.

6.104 These results are consistent with a study by the Canadian Urban Transit Association, which found that, on their own, payroll deduction programs do not always attract significant numbers of new transit riders in the short term. A key impact of these programs is rider retention. When asked under what circumstances they would consider using urban transit more frequently, the majority of employees eligible to participate in the pilot project indicated that they would do so if transit service was faster, more frequent, or more reliable.

6.105 We noted that federal ministers supported the launch of the pilot project. The project was promoted through e-mails, posters, and press releases. Staff felt that their employer was showing leadership.

The Government of Canada is calling on all Canadians to reduce the amount of greenhouse gases they produce in one year by 20 percent or about one tonne. Environment Canada, Natural Resources Canada, Transport Canada, and the Treasury Board Secretariat estimated that each new transit user reduced the number of kilometres they drove in one year by about 6,500. On average, each new rider met Canada's One Tonne Challenge.

6.106 Federal employees indicated that they became more aware of air and climate change issues as a result of the project. Employees who participated in the project appreciated the opportunity to purchase a transit pass through payroll deduction. They cited convenience and the modest discount as reasons for their support of the project.

Administrative costs not fully assessed

6.107 Instituting the pilot project through the federal payroll system had an administration cost. Federal pay personnel became actively involved in issuing transit passes, reconciling numbers of staff enrolled each month with payments to the transit companies, and keeping track of employees who were cancelling their passes. The total cost to set up and administer the project was estimated at 405 person-days and an additional $225,000, much of which were one-time costs. These included costs to reprogram and modify its payroll system, promote the project, and evaluate the results. Departmental officials stated that the project represented good value for money.

6.108 In fall 2003, the government decided to expand the payroll deduction program to all federal departments and agencies in the National Capital Region. A project office has been established at Transport Canada to co-ordinate this roll-out. The government has also asked the Canadian Urban Transit Association to consult with its member transit systems and evaluate their readiness to move ahead with a national program for federal employees.

The Canadian Urban Transit Association's (CUTA) goal is to enhance the public transit industry in Canada. Its members include urban transit systems, federal, provincial, and municipal government agencies; businesses involved in the sale or manufacture of transit equipment and services; consultants; and affiliates.

6.109 As the transit pass program is rolled out in the National Capital Region, the government will be assuming additional administrative duties on behalf of the transit authorities. The associated costs may not be significant, but they remain uncertain because the administrative costs were not estimated prior to this decision. In order to ensure that the government uses the most cost-effective tools available to accomplish its environmental objectives, any decision to expand the program further should be based on a clear assessment of costs and benefits.

6.110 **Recommendation.** Transport Canada, which will administer the project office for the payroll deduction program, should evaluate the costs relative to the benefits achieved before further expanding the program.

Transport Canada's response. The Department accepts the recommendation. Transport Canada, as the project lead for the transit pass program will continue to ensure that the cost benefits of the program are reviewed prior to full implementation.

As part of the pilot project evaluation, Transport Canada and the working group evaluated the costs and benefits of the project. The decision to move forward and expand the pilot project to the National Capital Region was based on a careful review of the costs with Public Works and Government Services Canada.

Once the transit pass program is implemented in the National Capital Region, Transport Canada will undertake a full cost-benefit analysis by fall 2005 before expanding such a program across Canada.

Conclusion

6.111 The environmental petitions process was established in 1995 as a tool for Canadians to get timely and substantive answers on environmental and sustainable development issues. Departments have a duty to maintain the integrity of the process.

6.112 We were generally pleased that most departments are responding in a timely and substantive manner to petitioners. However, petitioners are seldom informed of the outcome of actions promised and the end result of their petition. Departments need to do a better job of closing the loop with petitioners.

6.113 Through two audits (chapters 4 and 5), we verified facts contained in previous petition responses. Our audits found that some departments portrayed a more positive situation than was warranted. Departments should provide reliable information in their responses to petitions.

6.114 In their petition responses over the years, federal ministers have made commitments to act on the environmental concerns raised by petitioners. To determine whether these commitments have generated effective action by departments, we audited commitments in three petition responses. Our audits of commitments from past petition responses indicate the following:

- **Petition No. 50A.** Departments are taking action to implement their commitments concerning historic military dumpsites off Canada's Atlantic coast. Given the relatively short period since the start of the Underwater Unexploded Ordnance and Warfare Agent Disposal projects, it is too early to determine whether the departments will meet the timelines they have set. They have indicated that they are on target to complete their work on the projects by 2006 and 2008 respectively. Departments are taking steps to fulfill their commitments to communicate with stakeholders. However, departments have only just begun to take action on their commitment to develop a contingency plan.
- **Petition No. 38A.** Fisheries and Oceans Canada is meeting its commitment to conduct research to strengthen the risk assessment protocols, but there are still gaps in knowledge. The Department recognized the need for regulations in the early 1990s. However, 12 years have elapsed since it began work on the regulations and it has made little, if any, progress on them since the 2002 petition response. Fisheries and Oceans Canada has ensured that the facilities conducting research on GE salmon in Canada, of which it is aware, have been inspected and that the salmon are securely contained. However, the Department does not systematically monitor research on GE fish in Canada and is not effectively communicating containment and regulatory requirements to researchers.
- **Petition No. 29.** The federal government met its commitment to implement a transit pass pilot project. It measured the impact of the project and found there was a modest increase in ridership. The government needs to ensure that it is using the most cost-effective tools to accomplish its objectives as further expansion of the transit pass program is considered.

About the Audits

Objective

As part of audits conducted of strategic environmental assessment and the management of salmon (see chapters 4 and 5 of this report), claims made in petition responses were verified.

The objective of our three audits of commitments made in past petition responses (military dumpsites off Canada's Atlantic coast, genetically engineered fish, and encouraging greater use of urban transit by federal public servants) was to determine whether departments had implemented commitments made in their responses to selected petitions.

Criteria

It is expected that in order to implement a petition commitment, the entity would have

- clearly identified the commitment and what it means for the entity;
- planned its implementation;
- carried out the planned implementation, including communicating any changes as required; and
- determined that the commitment had been met and, where appropriate, evaluated the degree to which it addressed the overall issues raised in the petition.

Scope and approach

To determine which petition responses to audit, we reviewed all petitions and responses received by 18 July 2003. We selected the three petitions for audit using the following criteria:

- materiality/significance of the issue;
- risk that Canadians were not getting value for money and potential risk to the environment;
- sensitivity of the issue;
- federal mandate;
- availability of evidence/objectivity of information about the issue and the commitment made;
- auditability; and
- timeliness.

The audit work focussed solely on the commitments contained in petition responses. We conducted interviews and field work to determine whether and how well the commitments were being met. We collected data and evidence of implementation of the commitments, along with appropriate documentation. Some quantitative information in this chapter is based on data drawn from various federal and other sources indicated in the text. We are satisfied with the reasonableness of the data, given their use in our chapter. However, the data have not been audited, unless otherwise indicated in the chapter.

Audit team

Principal: Neil Maxwell
Directors: Steven Morgan, Jim McKenzie

Christine Allen
Elissa Cohen
Peter MacInnis
Adrienne Scott

For information, please contact Communications at (613) 995-3708 or 1-888-761-5953 (toll-free).

Appendix Petitions activity (19 July 2003 to 30 June 2004)

To access the full text of petitions and replies from December 1995 to 30 June 2004, go to our Petitions Catalogue on our Web site (www.oag-bvg.gc.ca/domino/petitions.nsf.english). If necessary, paper copies of the catalogue can be obtained on request.

Follow-up petitions

Petition No. 27E: Follow-up petition concerning the decommissioning of a mainline through Algonquin Park

Date submitted: 3 March 2004

Petitioner(s): Algonquin Eco Watch

Summary: This is the fifth petition concerning the decommissioning of an abandoned mainline through Algonquin Park. A number of letters have been sent by a legal representative of the petitioner to the Department of Fisheries and Oceans. The letters request information about the aerial survey of the abandoned mainline that was undertaken and the fisheries habitat training given to CN staff. As a result of the departmental response to the three letters, the petitioner is requesting a meeting with provincial and federal officials to discuss the concerns surrounding this issue. See related petitions 27A, B, C, and D.

Issues: Biological diversity (habitat) (wildlife) (watershed protection), fisheries (habitat) (enforcement), transportation (railways), and water issues (aquatic ecosystems)

Federal departments/agencies replying: Fisheries and Oceans Canada and Environment Canada

Status: Replies pending

Petition No. 38B: Follow-up petition on genetically engineered fish

Date submitted: 8 September 2003

Petitioner(s): Greenpeace Canada

Summary: This is a follow-up to petition No. 38A that dealt with federal government policy concerning the rearing of genetically engineered (GE) fish. Greenpeace maintains that all GE fish should be raised in secure, land-based facilities as the risks associated with the rearing of GE fish in open net pens in oceans and lakes are too high. In this petition, Greenpeace requests an update on progress made with respect to federal action on GE fish, including the development of a regulation for GE fish under the federal *Fisheries Act*.

Issues: Biotechnology (GMOs) (regulation and policy) and fisheries (aquaculture)

Federal departments/agencies replying: Environment Canada, Health Canada, Fisheries and Oceans Canada, and Department of Foreign Affairs and International Trade

Status: Completed

Petition No. 50B: Follow-up petition concerning military dumpsites off the Atlantic coast

Date submitted: 16 February 2004

Petitioner(s): Myles Kehoe

Summary: This follow-up petition concerns historic military dumpsites off Canada's East Coast. As with the first petition on this issue, the petitioner is concerned about the possible effects of petroleum resource exploration and bottom trawling activities in areas known or suspected of containing these sites. The petitioner poses a number of questions to the federal government, such as the destruction to the benthic environment, the health risk to fishermen and crews, and the possibility of a monumental environmental disaster from oil and gas exploration. See related petition No. 50A.

Issues: Biological diversity (habitat), human health/environmental health (toxic substances), water issues (aquatic ecosystems) (marine environment/oceans), international/bilateral issues, fisheries (habitat), and renewable and non-renewable resources (energy)

Federal departments/agencies replying: Environment Canada, Natural Resources Canada, Fisheries and Oceans Canada, Department of Justice Canada, National Defence, Health Canada, Atlantic Canada Opportunities Agency, and Foreign Affairs Canada

Status: Replies pending

Petition No. 56B: Follow-up petition on aquatic invasive species in the Great Lakes

Date submitted: 15 January 2004

Petitioner(s): John E.F. Misener

Summary: In this follow-up petition, the petitioner makes further recommendations to the federal government on ways to reduce the entry of invasive species into the Great Lakes from shipping. He suggests that the precautionary principle should be used and ship ballast water should be treated as a pollutant. He also requests a progress report on actions taken by the federal government since his first petition. See related petition No. 56A.

Issues: Biological diversity (invasive species), transportation (shipping), and water issues (aquatic ecosystems) (Great Lakes) (water quality)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, and Transport Canada

Status: Completed

Petition No. 60B: Insurance coverage and possible amendment of the *Nuclear Liability Act*

Date submitted: 18 July 2003

Petitioner: Siegfried (Ziggy) Kleinau (represented by the Canadian Environmental Law Association)

Summary: This petition is a follow-up to petition No. 60A. The petitioner is seeking more detailed information on federal plans to amend the *Nuclear Liability Act*, especially those provisions in the legislation related to insurance coverage. The petitioner seeks an increase in mandatory insurance coverage in line with international standards.

Issues: International/bilateral issues (international environmental agreements) and renewable and non-renewable resources (nuclear energy)

Federal departments/agencies replying: Natural Resources Canada

Status: Completed

Petition No. 82B: Federal environmental assessment for pipeline relocation for the Red Hill Creek Valley expressway project in Hamilton, Ontario

Date submitted: 4 September 2003

Petitioner(s): Bob Hicks

Summary: This petition concerns the City of Hamilton's proposed Red Hill Creek Valley expressway project and the federal environmental assessment required to assess effects associated with the relocation of a natural gas pipeline. See related petitions 82A and 82C.

Issues: Environmental assessment

Federal departments/agencies replying: Environment Canada and Fisheries and Oceans Canada

Status: Completed

Petition No. 82C: Aboriginal burial grounds and the Red Hill Creek Valley expressway project

Date submitted: 7 October 2004

Petitioner(s): Bob Hicks

Summary: This petition concerns federal responsibilities related to protection of Aboriginal burial grounds that may be affected by the proposed expressway project through the Red Hill Creek Valley in Hamilton, Ontario. See related petitions 82A and 82B.

Issues: Other (Aboriginal concerns) (heritage conservation)

Federal departments/agencies replying: Department of Canadian Heritage and Indian and Northern Affairs Canada

Status: Replies pending

Petition No. 92B: Follow-up actions arising from the federal environmental assessment and approval of the Oldman River Dam project

Date submitted: 26 September 2003

Petitioner(s): The Friends of the Oldman River

Summary: This petition concerns the 1992 report of the Environmental Assessment Panel on the Oldman River Dam project. It addresses actions that have been taken by the federal government as a result of the government's response to the Panel's 23 recommendations.

Issues: Environmental assessment, human health/environmental health, fisheries (habitat), water issues (water quality) (aquatic ecosystems) (navigable waters) (watershed protection), other (Aboriginal concerns), and renewable and non-renewable resources

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, Indian and Northern Affairs Canada, Natural Resources Canada, and Transport Canada

Status: Replies pending

Petition No. 104B: Follow-up petition concerning the construction of a sewage pipeline in the City of Ottawa

Date submitted: 23 June 2004

Petitioner(s): Bruce Webster

Summary: This is a follow-up petition concerning the construction of a sewage pipeline in the City of Ottawa. The petitioner believes that the sewage pipeline will eventually impede the normal flow of the river and alter the natural habitat of certain species of fish. Also, the petitioner is concerned that the *Navigable Waters Protection Act* has been violated because the pipeline is a hazard to boats, anchors, and other marine objects. Questions are directed to Transport Canada and Fisheries and Oceans Canada. See related petition No. 104A.

Issues: Fisheries (habitat) (enforcement) and water issues (aquatic ecosystems) (navigable waters)

Federal departments/agencies replying: Fisheries and Oceans Canada and Transport Canada

Status: Replies pending

Petition No. 106B: Follow-up petition concerning the regional road project in St. Albert, Alberta

Date submitted: 20 May 2004

Petitioner(s): Dave Burkhart

Summary: In this follow-up petition, the petitioner raises concerns about the degree of public access to information related to the environmental assessment of the St. Albert West Regional Road project. Furthermore, the petitioner suggests that significant bridge design changes have been proposed that make the proponent's environmental impact assessment (EIA) invalid. According to the petitioner, the proponent should be required to re-submit its EIA to ensure that all relevant issues are addressed. See related petition No. 106A.

Issues: Biological diversity (habitat) (protected areas) (wetlands) (wildlife), environmental assessment, fisheries (habitat), human health/environmental health (contaminated sites), other (infrastructure), and water issues (drinking water) (groundwater) (water quality)

Federal departments/agencies replying: Environment Canada and Fisheries and Oceans Canada

Status: Replies pending

New petitions

Petition No. 121: The *Species at Risk Act*

Date submitted: 30 June 2004

Petitioner(s): Environmental Defence Fund

Summary: This petition concerns the *Species at Risk Act* (SARA). The petitioner believes there are deficiencies in the Act that will hinder its effectiveness in preventing species decline. The petitioner also questions the reasons for the delayed implementation of certain parts of SARA.

Issues: Biological diversity (conservation) (endangered species) (habitat) (wildlife)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, and Parks Canada Agency

Status: Replies pending

Petition No. 120: Decommissioning of the Cluff Lake uranium mine in Saskatchewan

Date submitted: 25 June 2004

Petitioner(s): W.R. Adamson

Summary: This petition concerns the environmental assessment of a proposal to decommission the Cluff Lake uranium mining facility in northwestern Saskatchewan. The petitioner poses a number of questions about the environmental assessment report, the lack of a panel review, and mitigation measures related to contaminated lake sediment and water.

Issues: Biological diversity (habitat) (wildlife), human health/environmental health (radioactive waste), renewable and non-renewable resources (mining), and water issues (aquatic ecosystems) (water quality) (watershed protection)

Federal departments/agencies replying: Environment Canada

Status: Reply pending

Petition No. 119: Potential adverse impacts of proposed sablefish aquaculture on the wild sablefish stocks and fishery

Date submitted: 25 June 2004

Petitioner(s): Canadian Sablefish Association

Summary: According to the petitioner, the future of the sablefish stocks and fishery could be jeopardized by the development of sablefish aquaculture without a comprehensive environmental assessment of the potential impacts upon wild sablefish and their habitat. The petitioner poses a number of questions to Fisheries and Oceans Canada about the precautionary approach, a species-specific environmental assessment, and research undertaken on sablefish aquaculture.

Issues: Environmental assessment and fisheries (aquaculture)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Reply pending

Petition No. 118: The environmental impacts of man-made dams

Date submitted: 21 June 2004

Petitioner(s): The Friends of the Oldman River

Summary: This petition concerns the environmental impacts of man-made dams. The petitioner indicates that the federal government has constitutional responsibilities for navigable waters and for fisheries habitat. As such, the petitioner requests that Transport Canada provide a list of man-made dams with approvals under the *Navigable Waters Protection Act*. The petitioner also requests that Fisheries and Oceans Canada provide a list of the man-made dams on water bodies supporting fish habitat.

Issues: Fisheries (habitat) and water issues (watershed protection) (navigable waters)

Federal departments/agencies replying: Fisheries and Oceans Canada and Transport Canada

Status: Replies pending

Petition No. 117: Hazardous waste incinerator in Belledune, New Brunswick

Date submitted: 15 June 2004

Petitioner(s): Jean La Pointe

Summary: This petition concerns a hazardous waste incinerator proposed for Belledune, New Brunswick. The petitioner asked the federal government to impose a moratorium on the operation of the incinerator pending the outcome of a federal panel review of the incinerator proposal.

Issues: Air issues (air quality), environmental assessment, human health/environmental health (toxic substances), and international/bilateral issues (transboundary concerns)

Federal departments/agencies replying: Fisheries and Oceans Canada and Environment Canada

Status: Replies pending

Petition No. 116: Construction of a boat ramp in Hurkett Cove on Lake Superior

Date submitted: 7 June 2004

Petitioner(s): Two Canadian residents

Summary: The petitioners are concerned about the environmental impacts of a boat launch project in Hurkett Cove on Lake Superior. According to the petitioners, the area is rich in native history, and the proposed boat launch is contrary to environmental conservation and protection.

Issues: Biological diversity (conservation) (habitat) (wetlands) (wildlife) (watershed protection)

Federal departments/agencies replying: Fisheries and Oceans Canada and Public Works and Government Services Canada

Status: Replies pending

Petition No. 115: The grey whale, a species at risk

Date submitted: 30 April 2004

Petitioner(s): Thomas Hossie

Summary: The petitioner is concerned about the future of the grey whale. The Atlantic population is extirpated, and the Eastern and Western Pacific populations are endangered. The petitioner asks the federal government for statistics on grey whale populations. The petitioner is also interested in knowing what the government is doing to protect the whales from environmental change, habitat loss, toxic substances, harmful ship strikes, and entanglement in fishing gear.

Issues: Biological diversity (endangered species) (habitat) (wildlife) (conservation), water issues (marine environment/oceans), and transportation (shipping)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, Parks Canada Agency, and Transport Canada

Status: Replies pending

Petition No. 114: Environmental impact assessment for a proposed road in Qualicum Beach, British Columbia

Date submitted: 11 May 2004

Petitioner(s): Qualicum Beach Environment Committee

Summary: The petitioner expresses concerns about the environmental impact assessment undertaken for the Laburnum/Rupert Ring Road project in Qualicum Beach, British Columbia. The petitioner's main concern is that an identified Sensitive Ecosystem Inventory (SEI) site will be destroyed by the proposed road. The petitioner believes the initial environmental impact assessment neglected to take the SEI into account.

Issues: Biological diversity (habitat) (wetlands), environmental assessment, and other (infrastructure)

Federal departments/agencies replying: Environment Canada and Western Economic Diversification Canada

Status: Replies pending

Petition No. 113: Environmental impact assessment of the expansion of the Peace Bridge connecting Fort Erie, Ontario and Buffalo, New York

Date submitted: 10 June 2004

Petitioner(s): Richard Berry

Summary: This petition concerns the environmental assessment for the proposed expansion at the Peace Bridge in Fort Erie, Ontario. According to the petitioner, there should be a panel review of the proposal that takes into account the effects of expanding both the bridge and the plaza. Another issue the petitioner raises is the effect that the expansion will have on archeological Aboriginal sites.

Issues: Air issues (air quality) (ozone depletion) (transboundary concerns), environmental assessment, international/bilateral issues (transboundary concerns), and other (Aboriginal concerns) (infrastructure)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, International Trade Canada, and Transport Canada

Status: Replies pending

Petition No. 112: Municipal wastewater discharges and pollution of the marine environment

Date submitted: 27 April 2004

Petitioner(s): Georgia Strait Alliance & United Fisherman and Allied Workers Union–Canadian Auto Workers (represented by the Sierra Legal Defence Fund)

Summary: This petition concerns pollution of the marine environment. The petitioners contend that the federal government is failing to effectively control harmful discharges of municipal wastewater into the ocean. They allege that some of these discharges, due to inadequate treatment, may contain persistent organic pollutants such as PCBs. The petitioners ask the federal government to take steps to address this problem.

Issues: Biological diversity (habitat) (endangered species), environmental health/human health (toxic substances), fisheries (habitat), international/bilateral issues (transboundary concerns), and water issues (marine environment/oceans) (water quality) (enforcement)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, and Western Economic Diversification Canada

Status: Replies pending

Petition No. 111: Dams on navigable waters in Canada

Date submitted: 13 April 2004

Petitioner(s): The Friends of the Oldman River

Summary: The petitioner seeks clarification on the number of dams present on navigable waters in Canada. The petitioner also wants to know how many of these dams are on bodies of water that support fish habitat.

Issues: Fisheries (habitat) and water issues (navigable waters)

Federal departments/agencies replying: Fisheries and Oceans Canada and Transport Canada

Status: Withdrawn

Petition No. 110: The Great Lakes Action Plan

Date submitted: 13 April 2004

Petitioner(s): Nina Weiss

Summary: The petitioner is concerned that government departments will not fulfill the objectives that were laid out in the Great Lakes Action Plan. She requests information on the specific policies, plans, and programs that have been implemented by each department in response to the Plan.

Issues: Biological diversity (invasive species) and water issues (aquatic ecosystems) (Great Lakes)

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, Natural Resources Canada, Parks Canada Agency, Public Works and Government Services Canada, and Transport Canada

Status: Replies pending

Petition No. 109: Environmental and health impacts of a closed landfill in Cramahe, Ontario

Date submitted: 17 May 2004

Petitioner(s): Bruce Melnichuk

Summary: The petitioner alleges that a closed landfill in Cramahe, Ontario is discharging contaminants into nearby Cold Creek in contravention of the *Fisheries Act*. The creek feeds into the Trent River, which is a tributary to Lake Ontario.

Issues: Fisheries (enforcement), human health/environmental health, and water issues (groundwater) (water quality)

Federal departments/agencies replying: Environment Canada

Status: Reply pending

Petition No. 108: Human, social, and environmental impacts of genetic engineering

Date submitted: 7 April 2004

Petitioner(s): Anna Kirkpatrick

Summary: The petitioner raises concerns about the human, social, and environmental impact of genetic engineering. According to the petitioner, genetic engineering is a relatively new and untested technology that poses a serious threat to sustainable development in Canada. The petitioner poses questions about the production and licensing of genetically engineered (GE) crops, and the impact of GE crops on human health, biodiversity, and sustainable farming.

Issues: Agriculture (sustainable agriculture) and biotechnology (GMOs) (regulation and policy)

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, Health Canada, and Industry Canada

Status: Replies pending

Petition No. 107: Environmental impact assessment of a boat launch project in Hurkett Cove, Ontario

Date submitted: 22 April 2004

Petitioner(s): A Canadian resident

Summary: The petitioner is concerned about the environmental impacts of a proposed boat launch in Hurkett Cove on Lake Superior. According to the petitioner, the boat launch ramp would be built within a wetland. The petitioner has concerns about endangered and rare species, fish habitat, native values, and archaeological sites.

Issues: Biological diversity (conservation) (endangered species) (habitat) (wetlands), environmental assessment, and fisheries (habitat)

Federal departments/agencies replying: Fisheries and Oceans Canada and Public Works and Government Services Canada

Status: Replies pending

Petition No. 106A: Proposed regional road in St. Albert, Alberta

Date submitted: 21 April 2004

Petitioner(s): Dave Burkhart

Summary: The petitioner believes that the St. Albert West Regional Road project will threaten Big Lake. The petitioner feels this project will also contaminate the regional water supply because there are two aquifers directly below the proposed road. In order to build the proposed road, landfill sites and sewage lagoons would also have to be crossed.

Issues: Environmental assessment, human health/environmental health, biological diversity (habitat) (wildlife) (wetlands), fisheries (habitat), other (infrastructure), and water issues (groundwater) (water quality)

Federal departments/agencies replying: Environment Canada and Fisheries and Oceans Canada

Status: Replies pending

Petition No. 105: Environmental assessment of a regional road project through the wetland of Big Lake in St. Albert, Alberta

Date submitted: 10 March 2004

Petitioner(s): Elke Blodgett

Summary: The proposed construction of a regional road through the Big Lake wetland in St. Albert, Alberta is the subject of this petition. The petitioner is concerned that relevant documentation about the effects of the road is not being included in the Public Registry managed by Fisheries and Oceans Canada for the federal environmental assessment of the proposed project. According to the petitioner, the excluded documents and reports are crucial for Fisheries and Oceans Canada to make an informed decision on the environmental assessment. The petitioner would also like to know why the high level of public concern about the project has not resulted in a panel review.

Issues: Biological diversity (habitat) (wetlands), fisheries (habitat), environmental assessment, and other (infrastructure)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Reply pending

Petition No. 104A: Proposal to construct a sewage pipeline in the City of Ottawa

Date submitted: 20 February 2004

Petitioner(s): Bruce Webster

Summary: This petition concerns the proposed construction of a sewage pipeline, beginning in Munster Hamlet and terminating in the village of Richmond in the City of Ottawa. The petitioner is concerned that the pipeline will contaminate 1,200 household wells by the injection of raw sewage into an adjoining aquifer. Also, the proposed pipeline will cross the Jock River and Richmond Fen, potentially disrupting the natural habitat. As the Jock River is a navigable waterway, the petitioner is requesting that an environmental assessment be completed before the construction begins.

Issues: Environmental assessment, fisheries (habitat), and water issues (navigable waters) (groundwater) (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 103: Development of the coal bed methane industry in Canada

Date submitted: 20 February 2004

Petitioner(s): Eric Kennedy

Summary: This petition concerns the potential development of the coal bed methane industry in the Maritimes and Western Canada. The petitioner presents a number of environmental problems that could potentially result from the growth of this industry, including the contamination of wells, habitat loss from refining methods, and construction of roads to the extraction sites. The petitioner is requesting that the federal government write guidelines and regulations for the industrial development of coal bed methane to ensure nation-wide environmental standards.

Issues: Water issues (groundwater), renewable and non-renewable resources (energy), and biological diversity (habitat)

Federal departments/agencies replying: Western Economic Diversification Canada, Environment Canada, and Natural Resources Canada

Status: Completed

Petition No. 102: Proposed hazardous waste incinerator in Belledune, New Brunswick

Date submitted: 6 February 2004

Petitioner(s): Simon Deslauriers

Summary: This petition concerns the proposal by Bennett Environmental Inc. to locate a hazardous waste incinerator in Belledune, New Brunswick. The petition addresses the federal government's involvement with respect to such a proposal in light of possible inter-provincial environmental impacts arising from emissions from the proposed facility, international environmental and trade obligations, and federal regulations governing importation and transportation of hazardous waste to the facility.

Issues: Air issues (air quality), human health/environmental health (hazardous waste), international/bilateral issues (transboundary concerns), and transportation

Federal departments/agencies replying: International Trade Canada and Environment Canada

Status: Replies pending

Petition No. 101: Proposal to build a natural gas generating station at Suroit, Quebec

Date submitted: 28 January 2004

Petitioner(s): Héritage Saint-Bernard

Summary: This petition from the organization Héritage Saint-Bernard concerns the proposed Suroît natural-gas power-generating station in Beauharnois near Montreal. The proponent of the proposed project is Hydro-Québec. Questions directed to Environment Canada seek to clarify the Department's position with regard to such a project in the context of its responsibilities related to the Kyoto Protocol and its Sustainable Development Strategy.

Issues: Air issues (climate change) and international/bilateral issues (international environmental agreements)

Federal departments/agencies replying: Environment Canada

Status: Completed

Petition No. 100: Proposal to develop stormwater infrastructure for a residential development near the Leitrim wetlands

Date submitted: 22 January 2004

Petitioner(s): The Friends of Leitrim Wetlands

Summary: The petitioner is concerned that the development of stormwater infrastructure for a new residential area in the village of Leitrim in the City of Ottawa will require a major realignment of Findlay Creek and disrupt part of the provincially significant Leitrim wetland. There is a landfill on federally owned land in close proximity to the wetland. The petitioner alleges that there is a hydro geological connection between the landfill and the wetland that could result in leachate contaminating the wetland and the drinking water in the new residential area. A federal environmental assessment was completed; however, Fisheries and Oceans Canada determined that the project would not result in any significant environmental effects. The petitioner challenges many of the actions taken by federal departments in past years, particularly their roles in the environmental assessment.

Issues: Biological diversity (wetlands) (habitat) (watershed protection) (wildlife), environmental assessment, fisheries (habitat), human health/environmental health (toxic substances), and water issues (aquatic ecosystems) (drinking water) (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada, Environment Canada, Transport Canada, Health Canada, and Natural Resources Canada

Status: Completed

Petition No. 99: Dying trumpeter swans in Judson Lake, British Columbia

Date submitted: 15 January 2004

Petitioner(s): Kevin Sinclair

Summary: Judson Lake straddles the border between British Columbia and Washington State and is the subject of this petition. The petitioner alleges that lead shot resulting from years of hunting in and around the lake has contaminated the lake, which is a favourite roosting spot for trumpeter swans. Due to an increase in water usage and natural infilling, water levels in the lake are decreasing. The petitioner believes that this places the migrating swans at greater risk because they are closer to the lead shot at the bottom of the lake. Hundreds of swans are found dead in or near the lake each year. The petitioner wants to remove the lead shot from the lake and poses a series of questions about this proposal to Environment Canada and Fisheries and Oceans Canada.

Issues: Biological diversity (habitat) (wildlife) (conservation), fisheries (habitat), and human health/environmental health (toxic substances)

Federal departments/agencies replying: Environment Canada and Fisheries and Oceans Canada

Status: Completed

Petition No. 98: The tax deductibility of environmental fines

Date submitted: 17 December 2003

Petitioner(s): David R. Boyd

Summary: This petition concerns a 1999 decision by the Supreme Court of Canada that affects the tax deductibility of environmental fines and penalties. As a result of this ruling by the court, businesses operating in Canada can deduct fines and penalties levied for violating environmental and other laws from their business income for tax purposes. The petitioner suggests that the deduction of environmental fines will result in corporations regarding them as a mere cost of doing business. The petitioner is requesting that the Minister of Finance amend the *Income Tax Act* to explicitly prohibit this deduction. Ministers that are responsible for enforcing environmental legislation are also asked to provide their views on this matter.

Issues: Other

Federal departments/agencies replying: Environment Canada, Department of Finance Canada, Natural Resources Canada, and Transport Canada

Status: Completed

Petition No. 97: Toxicity of the arsenic-based pesticide Monosodium Methane Arsenate (MSMA)

Date submitted: 5 November 2003

Petitioner(s): Canadian Association of Physicians for the Environment (CAPE)

Summary: In this petition, the Canadian Association of Physicians for the Environment (CAPE) expresses concern about the arsenic-based pesticide MSMA, which is used by the forestry industry to control bark beetle. The petitioner asserts that there are new scientific findings on the toxicity of arsenic that need to be considered by the Pest Management Regulatory Agency of Health Canada. Several questions are posed in this petition about MSMA, including questions on re-registration, environmental effects, and human exposure.

Issues: Human health/environmental health (pesticides)

Federal departments/agencies replying: Health Canada

Status: Completed

Petition No. 96: Environmental and health impacts of game farming in Canada

Date submitted: 31 October 2003

Petitioner(s): Canadian Wildlife Federation

Summary: This petition concerns commercial game farming in Canada. The Canadian Wildlife Federation contends that game farms pose a threat to wild populations of deer, conventional livestock, the environment, and human health. The Federation is very concerned about the spread of disease, in particular, chronic wasting disease (CWD), from game farms to wildlife and people. The petitioner asserts that governments at both the provincial and federal levels are failing to address the impacts of game farming. Federal policy on exports of cervid parts to Asian markets is also explored in this petition.

Issues: Agriculture (sustainable agriculture), biological diversity (wildlife), and human health/environmental health

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Department of Foreign Affairs and International Trade, Environment Canada, and Health Canada

Status: Completed

Petition No. 95: Acid drainage and re-opening of metal mine in northern British Columbia

Date submitted: 29 September 2003

Petitioner(s): Society for Atlin's Sustainable Economic Initiatives (SASEI)

Summary: This petition concerns the Tulsequah Chief mine site in northern British Columbia. The mine operated from 1951 to 1957. New owners wish to re-open the mine. Several issues are addressed in this petition. Some concern historical pollution problems, such as acid mine drainage and water pollution from the mine site and enforcement of the pollution prevention provisions of the *Fisheries Act* by Environment Canada. Other issues arise from the proposal to re-open the mine and the federal environmental assessment of the project. They include protection of fish habitat, transboundary waters (and other issues with an international or transboundary connection), endangered species, transportation of dangerous goods, and fiduciary obligations to First Nations.

Issues: Biological diversity (conservation) (endangered species), environmental assessment, fisheries (enforcement) (habitat), human health/environmental health (contaminated sites), international/bilateral issues (transboundary concerns) (international environmental agreements), water issues (aquatic ecosystems) (enforcement) (water quality), other (Aboriginal concerns), transportation (dangerous goods), and renewable and non-renewable resources (mining)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, Department of Foreign Affairs and International Trade, Indian and Northern Affairs Canada, and Transport Canada

Status: Completed

Petition No. 94: Biotechnology and "Pharming Crops"

Date submitted: 8 September 2003

Petitioner(s): Greenpeace Canada

Summary: This petition, as with other petitions submitted by Greenpeace Canada, deals with biotechnology. In this instance, the petition concerns genetically engineered (GE) crops designed for pharmaceutical applications and/or industrial production ("pharming crops"). It also contains questions that deal with GE animals and/or other living organisms.

Issues: Biotechnology (GMOs) (regulation and policy)

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, Canadian International Development Agency, Canada Customs and Revenue Agency, Department of Finance Canada, Health Canada, Department of Foreign Affairs and International Trade, and Industry Canada

Status: Completed

Petition No. 93: New Substances Notification Regulations under the *Canadian Environmental Protection Act, 1999*

Date submitted: 4 September 2003

Petitioner(s): IET–Aquaresearch Limited

Summary: This petition concerns a micro-organism Bacta-Pur® and the New Substances Notification Regulations under the *Canadian Environmental Protection Act*, 1999. Questions in the petition largely concern federal mechanisms that allow for registration of new products in Canada for uses that are not food-related.

Issues: Other

Federal departments/agencies replying: Environment Canada

Status: Completed

Petition No. 92A: Follow-up actions arising from the federal environmental assessment of the Oldman River Dam project

Date submitted: 27 August 2003

Petitioner(s): The Friends of the Oldman River

Summary: This petition addresses two core issues. The first concerns the recent recommendations made by the Oldman River Dam Environmental Advisory Committee related to the authorization issued by Fisheries and Oceans Canada for the

Oldman River Dam project. The second issue relates to the Department's annual report to Parliament on the administration and enforcement of the provisions of the *Fisheries Act* for habitat protection and pollution prevention.

Issues: Environmental assessment, fisheries (habitat), and other (information and reporting)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 91: Environmental problems at the Buffalo Point Reserve in Manitoba

Date submitted: 28 July 2003

Petitioner(s): A Canadian resident

Summary: This petition concerns the Buffalo Point Indian Reserve in Manitoba. Several issues are outlined in the petition. These include dumping of raw sewage, pesticide run-off, poor quality of drinking water, protection of fish and navigational safety, and transboundary waters. The reserve is located on the Lake of the Woods, close to the Canada–United States border.

Issues: Human health/environmental health (hazardous waste), fisheries (habitat), water issues (drinking water) (water quality) (navigable waters), international/bilateral issues (transboundary concerns), and other (Aboriginal concerns)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, Health Canada, and Indian and Northern Affairs Canada

Status: Completed

Petition No. 90: Fishing practices and effects on sensitive fish habitat in the ocean

Date submitted: 25 July 2003

Petitioner(s): Ecology Action Centre

Summary: This petition concerns commercial fishing practices authorized by Fisheries and Oceans Canada. The petitioner alleges that the Department is allowing destructive fishing practices off the Atlantic coast that are destroying vital ocean habitat. According to the petitioner, this is contrary to the Department's mandate to protect fish habitat. The issue is the practice of dragger fishing. The Ecology Action Centre says that there is widespread scientific evidence that this type of trawling has severe negative impacts on the ocean floor by destroying sensitive bottom habitat such as coral beds.

Issues: Fisheries (habitat) (conservation)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 89: Possible lead contamination in properties slated for redevelopment

Date submitted: 14 July 2003

Petitioner(s): Faye Morgan and several Canadian residents

Summary: This petition concerns suspected lead contamination in two properties located close to the Rideau and Ottawa rivers in Ottawa, Ontario. The petitioners want federal departments to intervene and require the property owners to conduct soil testing prior to any re-redevelopment of the properties.

Issues: Environmental assessment, fisheries (habitat), human health/environmental health (toxic substances), and water issues (water quality)

Federal departments/agencies replying: Fisheries and Oceans Canada and Environment Canada

Status: Completed

Petition No. 88: Genetically-engineered wheat and the future of Canadian agriculture

Date submitted: 18 July 2003

Petitioner(s): Greenpeace Canada

Summary: According to the petitioner, the federal government received a submission for approval of a variety of genetically engineered (GE) wheat in 2002. The petitioner is opposed to the environmental release of GE wheat. According to the petitioner, the introduction of GE wheat into fields, food, and wheat markets raises agronomic, health, economic, ethical, and social concerns. The petition seeks to clarify the federal government's policy and position on GE wheat and determine what action the government has taken, or will take, to prevent negative environmental impacts from GE wheat.

Issues: Agriculture (sustainable agriculture), biotechnology (GMOs) (regulation and policy), and international/bilateral issues (international environmental agreements)

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, Department of Finance Canada, Department of Foreign Affairs and International Trade, Health Canada, Industry Canada, Natural Resources Canada, Parks Canada Agency, and Western Economic Diversification Canada

Status: Completed

Petition No. 87: Advertising and labelling of pesticides

Date submitted: 16 July 2003

Petitioner(s): Earth Action

Summary: This petition concerns pesticide labelling and advertising. The petitioner alleges that certain pesticide manufacturers and lawn care companies are contravening the federal *Pest Control Products Act* by making claims that certain pesticides are "green" or offer environmental benefits. The petitioner asks Health Canada to investigate and indicate what it is doing to enforce federal pesticide legislation.

Issues: Human health/environmental health (pesticides)

Federal departments/agencies replying: Health Canada

Status: Completed

Petition No. 86: Commercial tourist operation in Jasper National Park

Date submitted: 16 July 2003

Petitioner: Jasper Environmental Association

Summary: This petition concerns a commercial tourist operation on Maligne Lake in Jasper National Park. The petitioner contends that the tourist operation's activities are going to expand under new, proposed arrangements between Parks Canada Agency and the operation owners. These include, among other things, longer hours of operation and a doubling of the capacity of tour boats on Maligne Lake.

Issues: Environmental assessment and biological diversity (conservation) (endangered species) (habitat) (protected areas)

Federal departments/agencies replying: Parks Canada Agency and Environment Canada

Status: Completed

Petition No. 85: Genetically engineered crops and products – trade and other international concerns

Date submitted: 17 July 2003

Petitioner: Greenpeace Canada

Summary: This petition covers a variety of issues pertinent to federal policies and positions with respect to genetically engineered (GE) crops and products. They include the following: Canada's position on the European Union's mandatory labelling and traceability program for GE crops and products, new international guidelines on food labelling, development assistance and GE crops, proposed bilateral arrangements for trade of Canadian agricultural products, and international markets for Canadian agricultural exports.

Issues: Agriculture (sustainable agriculture), biotechnology (GMOs) (regulation and policy) (enforcement), and international/bilateral issues (international environmental agreements) (international development assistance)

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, Industry Canada, Department of Foreign Affairs and International Trade, Canadian International Development Agency, and Health Canada

Status: Completed

Petition No. 84: Effects of genetically engineered crops on soil health

Date submitted: 10 July 2003

Petitioner: Greenpeace Canada

Summary: According to the petitioner, little attention has been paid to the effects of genetically engineered (GE) crops on soil and soil health. The petitioner suggests that the federal government should invoke the precautionary principle and eliminate GE crops given the scientific uncertainty surrounding their effects on soil health. The petitioner also requests that the federal government undertake a series of independent, peer-reviewed studies on this issue.

Issues: Agriculture (sustainable agriculture), biotechnology (GMOs) (regulation and policy), human health/environmental health, biological diversity, and international/bilateral issues (international environmental agreements)

Federal departments/agencies replying: Agriculture and Agri-Food Canada, Environment Canada, and Industry Canada

Status: Completed

Petition No. 83: Air pollution at the Canada–U.S. border

Date submitted: 10 July 2003

Petitioner: Leo Petrilli

Summary: This petition concerns the volume of truck traffic crossing the Canada–U.S. border at Windsor–Detroit. The petitioner alleges that air quality in Windsor has suffered due to a dramatic increase in trucks crossing the border since the adoption of the North American Free Trade Agreement. The petitioner wants to know what the federal government is doing to protect Canadians from exposure to environmental contaminants and to enforce pollution laws. The petitioner also wants the government to pay for an air quality study at the border.

Issues: Air issues (air quality) (transboundary concerns), and human health/environmental health, international/bilateral issues (trade), and transportation

Federal departments/agencies replying: Environment Canada and Health Canada

Status: Completed

Petition No. 82A: Red Hill Creek expressway project, Hamilton, Ontario

Date submitted: 11 July 2003

Petitioner(s): Bob Hicks

Summary: This petition concerns the City of Hamilton's Red Hill Creek expressway project and federal environmental approvals required for the expressway project.

Issues: Biological diversity (watershed protection), environmental assessment, and fisheries (habitat)

Federal departments/agencies replying: Fisheries and Oceans Canada

Status: Completed

Petition No. 81: Fixed link bridge to the Toronto City Centre Airport, Toronto Islands

Date submitted: 14 July 2003

Petitioner: Lake Ontario Waterkeeper

Summary: This petition concerns the federal environmental assessment for the proposed fixed link bridge to the Toronto City Centre Airport. An environmental assessment was carried out for a similar proposal in the late 1990s, but the bridge was never constructed. Some changes have taken place in the meantime, including the construction of the Spadina Quay wetland.

Issues: Biological diversity (wetlands) (wildlife), environmental assessment, other (infrastructure), and water issues

Federal departments/agencies replying: Fisheries and Oceans Canada, Environment Canada, and Transport Canada

Status: Completed

Petition No. 80: Clean-up of the Tracadie military training area in New Brunswick

Date submitted: 7 July 2003

Petitioner(s): Luc Perron, Donald Savoie, and Florent Richardson

Summary: This petition concerns clean-up of the Tracadie military training area and raises the same issues as petition No. 78. The petitioners are concerned that the presence of chemical and metallic contaminants represents a danger for the environment and water quality. The petition contains requests and recommendations about decontamination of the site and asks the government whether it will take additional steps to eliminate all forms of contamination at the former training area.

Issues: Human health/environmental health (contaminated sites) and other (military/defence)

Federal departments/agencies replying: National Defence

Status: Completed

Petition No. 79: Air quality and health concerns in Windsor, Ontario

Date submitted: 26 June 2003

Petitioner: Joe Comartin, Member of Parliament, Windsor-St. Clair

Summary: A community health study undertaken in Windsor, Ontario is the focus of this petition. The results of this study suggest that cancer rates in Windsor are higher than in other parts of the country. Poor air quality is identified as a possible cause of this problem and other health problems found in the area. The petitioner asks federal departments to investigate the study findings and clarify whether, and to what extent, the government is taking action to address the concerns outlined in the study.

Issues: Air issues (air quality) (transboundary concerns) and human health/environmental health

Federal departments/agencies replying: Environment Canada and Health Canada

Status: Completed

Petition No. 78: Cleanup of the Tracadie military training area in New Brunswick

Date submitted: 28 May 2003

Petitioner(s): Yvon Godin, Member of Parliament, Acadie-Bathurst

Summary: This petition concerns cleanup of the Tracadie military training area in New Brunswick, which was used by National Defence between 1942 and 1994. The petitioner suggests that the federal government should do a full decontamination of the training area. According to the petitioner, the work that has been done on the site was not done properly.

Issues: Human health/environmental health (contaminated sites) and other (military/defence)

Federal departments/agencies replying: National Defence

Status: Completed

Petition No. 77: The relationship between international trade and the environment

Date submitted: 5 May 2003

Petitioner(s): Yuill Herbert

Summary: This petition examines the relationship between international trade and the environment. The petitioner argued that increased international trade leads to increased greenhouse gas emissions because of trade's heavy dependence on transportation. The petitioner asked the Department of Foreign Affairs and International Trade to explain how it reconciles trade promotion with the need to protect the environment.

Issues: Air issues (climate change), international/bilateral issues (international environmental agreements) (trade) (climate change), renewable and non-renewable resources (energy) (energy conservation), transportation, and other (economic instruments)

Federal departments/agencies replying: Department of Foreign Affairs and International Trade

Status: Completed

Petition No. 76: Low-level radioactive waste in Port Hope, Ontario

Date submitted: 15 April 2003

Petitioner(s): Lake Ontario Waterkeeper

Summary: This petition concerns the federal environmental assessment of the Port Hope project for the remediation and management of low-level radioactive wastes located in various sites in the town of Port Hope and the former Hope Township. Natural Resources Canada is the federal responsible authority for the environmental assessment of the project.

Issues: Environmental assessment and human health/environmental health (radioactive waste)

Federal departments/agencies replying: Natural Resources Canada

Status: Completed

Petition No. 75: Boat mooring development in wetlands along the Trent-Severn Waterway

Date submitted: 28 March 2003

Petitioner(s): South Mariposa Lakefront Ratepayers Association

Summary: The petition concerns a plan to establish boat mooring for 66 boats in a wetland located in Lake Scugog on the Trent-Severn Waterway. According to the petitioner, the mooring facilities cannot be constructed without harming or disrupting fish habitat or wildlife such as migratory birds. The Association addressed several questions to the Parks Canada Agency as steward of the Waterway and administrator of regulations governing historic canals.

Issues: Biological diversity (habitat) (wetlands), environmental assessment, fisheries (habitat), and water issues (aquatic ecosystems) (navigable waters)

Federal departments/agencies replying: Environment Canada, Fisheries and Oceans Canada, and the Parks Canada Agency

Status: Completed

Petition No. 74: Ecological integrity of the Great Lakes

Date submitted: 4 April 2003

Petitioner(s): The Georgian Bay Association

Summary: This petition addresses several issues that are important to the ecological integrity of the Great Lakes: the withdrawal of fresh water from Lake Huron and Georgian Bay at the outflow into the St. Clair River near Sarnia; the introduction of invasive species by ships entering the Great Lakes Basin; the Great Lakes Navigation System Review; and, the future of the Welland Canal.

Issues: Biological diversity (invasive species) (watershed protection), environmental assessment, international/bilateral issues (international environmental agreements) (transboundary concerns) (climate change), transportation (shipping), and water issues (aquatic ecosystems) (watershed protection) (Great Lakes)

Federal departments/agencies replying: Environment Canada, Transport Canada, Fisheries and Oceans Canada, and the Department of Foreign Affairs and International Trade

Status: Completed

Petition No. 73: Environmental assessment of highway extension through Gatineau Park, National Capital Region

Date submitted: 20 March 2003

Petitioner(s): Association des Résidents et Résidentes du Quartier Wright

Summary: This petition pertains to the federal environmental assessment of the proposed extension of the McConnell-Laramée highway through Gatineau Park. The Association is concerned about public participation and the scope of the environmental assessment.

Issues: Environmental assessment, biological diversity (conservation) (habitat) (protected areas), and fisheries (habitat)

Federal departments/agencies replying: Transport Canada and Fisheries and Oceans Canada

Status: Completed

Petition No. 72: Preserving wetlands in the greater Montreal area

Date submitted: 19 March 2003

Petitioner(s): Comité Zip Ville-Marie

Summary: This petition concerns the potential sale of federal property located beside the St. Jacques River in the Greater Montreal area. According to the petitioner, a large portion of the land along the river was declared surplus by Transport Canada and may be sold soon. The Comité is concerned that the land will be sold without consideration for the long-term protection of wetlands on the property or the federal Policy on Wetland Conservation.

Issues: Biological diversity (conservation) (endangered species) (wetlands), water issues (aquatic ecosystems), and other (federal land)

Federal departments/agencies replying: Transport Canada and Environment Canada

Status: Completed

Petition No. 71: Access road to the MacKenzie King estate in Gatineau Park, National Capital Region

Date submitted: 19 March 2003

Petitioner(s): Citizens Concerned about Gatineau Park

Summary: This petition concerns a proposal by the National Capital Commission (NCC) to construct a new access road to the Mackenzie King estate in Gatineau Park in the National Capital Region. The coalition critiqued the environmental assessment conducted by the NCC and posed questions about environmental standards and processes applied by the Parks Canada Agency for similar proposed projects within a national park setting.

Issues: Environmental assessment, biological diversity (conservation) (habitat) (protected areas), and other (federal land) (infrastructure)

Federal departments/agencies replying: Parks Canada Agency

Status: Completed

Petition No. 67: Implementation of Rio Declaration principles for indigenous people

Date submitted: 31 January 2003

Petitioner(s): A Canadian resident

Summary: This petition concerns sustainable development and indigenous people and their communities. It follows from Canada's participation in the 2002 World Summit on Sustainable Development in Johannesburg, South Africa. At that meeting, Canada reaffirmed its commitment to implementing the principles outlined in the Rio Declaration on the Environment and Sustainable Development and the actions of Agenda 21. These include recognizing indigenous values, traditional knowledge, and resource management practices and enabling participation by indigenous people in sustainable development. The petitioner asks the federal government to outline how it will meet its commitments in these areas. Ten departments and agencies were asked to respond to this petition.

Issues: International/bilateral issues (international environmental agreements) and other (Aboriginal concerns)

Federal departments/agencies replying: Environment Canada, Canadian International Development Agency, Fisheries and Oceans Canada, Health Canada, Indian and Northern Affairs Canada, Industry Canada, Department of Justice Canada, Department of Foreign Affairs and International Trade, Natural Resources Canada, and Parks Canada Agency

Status: Completed

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons—2004

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